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GDC 12 SHOW ISSUE
Event preview inside

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develop iPad

Videos are available within the free iPad Edition of **Develop** on iTunes and the free Browser-based Digital Edition, which can be accessed at **develop-online.net**

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THIS MONTH: Indie Games: The Movie **Kerosene's first game: Bladeslinger** Speech Graphic's audio-driven facial animation

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ALPHA

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EDITORIAL

SHOWTIME

It is quite incredible that a whole year has passed since the last GDC.

And yet here we are again, moments from jetting off to the games development space's most significant global event.

Which means an issue of *Develop* conceived to tackle some of the most important technogies, themes and trends in the industry. And it's all tied in to GDC's big themes. So whether you're at the show or not, you'll have a finger on the pulse of the conference and expo.

On our cover you'll have already seen the directors of a new documentary about the independent development scene. Their film, *Indie Game: The Movie*, has already charmed the judges of the Sundance film festival, and for its next stop it will be premiered at GDC where – for the first time – the industry will get to see how it has been portrayed on the big screen. It's not the convergence between games and film many have long predicted, but the recognition in the creation of *Indie Game: The Movie* serves as a compliment to independent development's finest hour.

There's also a number of features in this issue that coincide with big show announcements. Our interviews with Autodesk and Geomerics should serve as a clue that the tech companies are still worth watching at GDC, and a special feature on a new publishing service named Kerosene reveals what former Unity man Brett Seyler has been up to since he left the engine company now ready to launch its 3.5 update.

On the matter of game engines, this issue also includes a fascinating five-page guide to the most important solutions out there, with all the key players and promising newcomers profiled in detail.

So, throughout GDC, whether you are in San Francisco or not, keep this issue to hand, and never stray more than a click away from www.develop-online.net.

Will Freeman
will.freeman@intentmedia.co.uk

Will

GDC 2012: Your Essential Digest

Develop brings you an invaluable guide to attending this year's Game Developers Conference, including a schedule for the time pressed

It's hard to believe that GDC is already here again, but the fact is that the busiest week in the games development calendar is back.

This year's GDC is set deliver the familiar mix of sessions, panels, tutorials, summits, trade booths and, of course, parties. But that's not to say the show's 26th year will mimic the previous GDCs. There's a new approach to keynotes, a host of fresh topics and discussions, and even some new sessions.

All of which can get a little overwhelming.

> ***The industry has topped itself by offering up even more thrilling talks that can only happen at GDC.***
>
> Meggan Scavio, GDC

Thankfully *Develop* is here with all the essential information you need. Glance over the following pages and you'll see times, dates, contact numbers, keynotes, the expo and registration details all covered.

Turn to page eight and you'll see our carefully considered conference schedule for those with no time to build their own, which makes sure you have plenty of opportunity to see the key sessions, time to make your way between venues, and even one late start so you can dash to Mel's Diner for a quick hangover cure.

And if you're visiting the show, remember; be nice to the Conference Associates. They make GDC happen, and as head organiser and general manager Meggan Scavio once said "one day they might be your boss".

On the subject of Scavio, she's more excited by this year's show than ever before.

"The pressure was on to continue to grow and evolve GDC after our exciting and record-breaking twenty-fifth anniversary last year. But once again, the industry has topped itself by offering up even more thrilling talks that can only happen at GDC, where the entire industry converges for the love of games and pushing the boundaries of development further and further," says the GDC boss.

"There are new ways to find and appreciate the content that matters to you – like the 'Flash Forward', or the six discipline-specific Track Keynotes, which would likely be main conference keynotes anywhere else – that will also make this year's GDC more valuable to attendees than ever."

By the sounds of it, this year's event is all set to be a great GDC. If you're at the show the *Develop* team will see you there. And, finally, do drop us a line if you want to meet in person.

THE EXPO

Along with the sessions that make up the core conference, the expo forms one of the most significant elements of GDC 2012.

Bringing together 100s of game companies of every kind across the San Francisco Moscone Centre's vast North Hall D and West Hall, it's the place to network, get your hands on tools and tech and pick up those all-important GDC party invites.

If you're new to the event, prepare yourself; getting to see everything the expo floor can offer could take a week, so pick carefully, and leave plenty of time to squeeze through the crowds.

Close to the Expo lies the GDC Business Centre; a key resource at the show found at West Hall 1st Floor.

Expo hours:
Wednesday, March 7th:
10:00am-6:00pm

Thursday, March 8th:
10:00am-6:00pm

Friday, March 9th:
10:00am-3:00pm

THE KEY FACTS

- 9am to 6pm approximately
- March 5th to March 9th
- Moscone Center, San Francisco, CA www.gdconf.com

- Registration starts 5pm, Sunday, March 4th
- Registration hotlines:
(415) 947-6926
(866) 535-8997

GDC Expo: March 7th to 9th
Summits and tutorials: March 5th to 6th
Main conference: March 7th to 9th

THE SUMMITS

The Summits occur on the Monday and Tuesday of the show. Take your pick from the following while spaces remain:

AI Summit
Game IT Summit
Localisation Summit
Games for Change
GDC Education Summit
Independent Games Summit
Smartphone & Tablet Games Summit
Social & Online Games Summit

THE KEYNOTES

This year GDC has adopted a new format for its keynote sessions. Shunning the tradition of presenting one central main conference keynote, the 2012 organisers have instead scheduled six Track Keynotes, each of which represents the various disciplines on which the main conference is arranged. Meanwhile the 9am Monday opening slot typically reserved for the main keynote this time goes to 'Flash Forward'; a unique presentation that gives all main conference speakers the opportunity to take to the stage for just sixty seconds each to give a brief overview of their forthcoming session.

THE TRACK KEYNOTES ARE:

- **Audio Track:** Build That Wall: Creating the Audio for *Bastion* by Darren Korb, audio director, Supergiant Games
- **Business, Marketing & Management Track:** Why 'Free' and Cross-Platform Is The Future of Gaming by John Schappert, chief operating officer, Zynga
- **Game Design Track:** How I Got My Mom to Play Through *Plants Vs. Zombies* by George Fan, senior game designer, PopCap
- **Production Track:** Concrete Practices to be a Better Leader: Framing & Intention by Brian Sharp, lead engineer, Bungie
- **Programming Track:** Designing a Technology Strategy for a Large Publisher by Julian Merceron, worldwide technology director, Square Enix
- **Visual Arts Track:** The Art of *Diablo 3* by Christian Lichtner, art director, Blizzard Entertainment

KEY CONFERENCE SCHEDULE OVER THE PAGE ▶

Conference Chaos? We've got you covered

Sessions and meetings competing for your attention at GDC? We've created a minute-by-minute guide to the best sessions so you can make the most of your time

MONDAY, MARCH 5TH

■ **10.00AM – 11.00AM**
Guidelines for Building Cross-Platform Games
Tapjoy, Funzio, others
Smartphone and Tablet Games Summit
Room 134, North Hall

■ **11:15AM - 11:40AM**
Applying Game and Social Mechanics to Sustainable Fashion: Closet Swap Case Study
Inensu
Game IT Summit
Room 2009, West Hall, 2nd Floor

■ **1:45PM - 2:45PM**
Entertaining the Enterprise: Helping You Level Up & Conquer Work
Ian bogost, IBM, others
Game IT Summit
Room 2009, West Hall, 2nd Floor

■ **3:35PM - 4:00PM**
Keys to the Asian Market
PopCap
Social and Online Games Summit
Room 130, North Hall

■ **5:05PM - 5:30PM**
Growth Opportunities for Online Games Beyond Facebook
Bigpoint
Social and Online Games Summit
Room 135, North Hall

TUESDAY, MARCH 6TH

■ **11:15AM - 12:15PM**
Animation Driven Locomotion for Smoother Navigation
IO Interactive, Eidos, Big Huge Games
AI Summit
Room 2006, West Hall, 2nd Floor

■ **2:20PM - 2:45PM**
Designing for Friendship: Shaping Player Relationships with Rules and Freedom
Thatgamecompany
Independent Games Summit
Room 2003, West Hall, 2nd Floor

■ **3:00PM - 4:00PM**
Iterating Design and Fighting Fires: Updating *Fruit Ninja* and *Jetpack Joyride*
Halfbrick Studios
Smartphone and Tablet Games Summit
Room 134, North Hall

■ **4:30PM - 4:55PM**
***Crysis* Management: Localisation from a Developer's Perspective**
Crytek
Localization Summit
Room 2002, West Hall, 2nd Floor

WEDNESDAY, MARCH 7TH

■ **9.00AM – 10.30AM**
Flash Forward
Special event (60 second presentations by numerous speakers)
GDC Ballroom, South Hall, Lower Level

■ **11:00AM - 12:00PM**
Composition Process in *Batman Arkham City*
Rocksteady Studios
Audio Track
Room 3010, West Hall, 3rd Floor

■ **2:00PM - 3:00PM**
***Forza Motorsport 4* Production Pipeline Architecture**
Turn 10 Studios
Programming Track
Room 2016, West Hall, 2nd Floor

■ **5.00PM – 6.00PM**
Art vs. Science: Fueling the Right Brain with the Left
Zynga, EA, others
Business, Marketing and Management Track
Room 2000, West Hall, 2nd Floor

THURSDAY,MARCH 8TH

■ **10:00AM - 11:00AM**
Bringing Triple-A Graphics to Mobile Platforms
Epic Games
Programming Track
Room 2002, West Hall, 2nd Floor

■ **11.30AM – 12.30PM**
Forgotten Tales Remembered: The Games that Inspired Leading Innovators
Bleszinski, Molyneux, Meier, Romero, Dyson
Game Design Track
Room 3014, West Hall, 3rd Floor

■ **2:30PM - 3:30PM**
Designing a Technology Strategy for a Large Publisher
Square Enix
Programming Track (Keynote)
Room 132, North Hall

■ **4:00PM - 5:00PM**
GDC Microtalks 2012: One Hour, Ten Voices, Countless Ideas
Bleszinski, Hennig, others
Game Design Track
Room 3014, West Hall, 3rd Floor

■ **5:30PM - 6:30PM**
Contrastive Juxtaposition: Contrast and Context in BioWare Story and Cinematics
BioWare
Game Design and Visual Arts Tracks
Room 132, North Hall

FRIDAY, MARCH 9TH

■ **10:00AM - 11:00PM**
Real-time Sound Propagation in Video Games
Ubisoft
Audio and Programming Tracks
Room 3004, West Hall, 3rd Floor

■ **11:30AM - 12:30PM**
Relaxed Hardcore: Why Asynchronous is the Next Big Thing in Core Gaming
Mode 7 Games
Game Design Track
Room 3007, West Hall, 3rd Floor

■ **11:30AM - 12:30PM**
Relaxed Hardcore: Why Asynchronous is the Next Big Thing in Core Gaming
Mode 7 Games
Game Design Track
Room 3007, West Hall, 3rd Floor

■ **2:30PM - 3:30PM**
Concrete Practices to Be a Better Leader: Framing & Intention
Bungie
Audio Track (Keynote)
Room 134, North Hall

■ **4:00PM - 5:00PM**
What You Don't Know IS Hurting You: How Aggressive User-Research Improved *Resistance 3*
Blizzard Entertainment
Game Design Track
Room 130, North Hall

■ **KEY**
■ AI Summit
■ Audio
■ Business, Marketing and Management
■ Game Design
■ Game IT Summit
■ Visual Arts
■ Localisation Summit
■ Independent Games Summit
■ Programming
■ Smartphone and Tablet Games
■ Social and Online Games

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€1m games development prize fund up for grabs

Make the Game competition to grant winner advance royalty payment and advertising budget worth a six-figure sum

Last year's Make the Game winner Reborn Horizon (main image), and its studio's communications manager Sascha Ahlers (middle). Computec COO Hans Ippisch (bottom) hopes the competition will appeal to studios previously let down by major publishers

by Will Freeman

GERMAN MEDIA COMPANY Computec has opened its annual Make the Game development contest for 2012.

Established last year the competition, conceived for creators of browser and social games, offers a substantial prize fund of €1 million to its chosen winner, divided across an advance royalty payment and advertising budget in Computec's print and online titles.

"As we all know, there are many, many talented developers out there – and many of them are not satisfied how things went in the past with most of their products," said Computec COO Hans Ippisch of the company's motivation to establish the competition.

"Major publishers took the major share of the revenues if their game was a success. Or they ignored their game completely, even though they have signed a contract. Or they just didn't have the money for a reasonable marketing campaign, when they tried to start on their own as an independent publisher. That's where we come in. We have direct access to millions of gamers and can support developers financially."

To be more precise, through the advertising element of the prize fund, the Make the Game winners will see their project exposed to some eight million readers globally; a fact that served as a significant boon to last year's victors, German studio SlipShift, which triumphed with browser strategy title *Reborn Horizon*.

"*Reborn Horizon* marked a phenomenal start of Make the Game," stated Ippisch. "It's a brilliant game that attracted nearly 50,000 users during its open beta phase since October 2011."

NEW HORIZONS

Ippisch adds that Make the Game is open to studios of every size, from microstudios and newcomers to established games production houses with vast headcounts.

In February 2012 *Reborn Horizon* was launched under the new name *Reborn Empire*, and is being published internationally by Trip Hawkins' operation Digital Chocolate.

"Receiving the Make the Game award last year has been a huge surprise for us," said SlipShift communications manager Sascha Ahlers of his employer's win in 2011. "Honestly, we almost forgot about our application, but winning the contest gave us the opportunity to establish a cooperation with the well-known German company Computec Media.

"Since then, they have been taking care of all marketing, PR, and community management matters for our game."

Additionally, Computec aids the winner in securing new business partners, and serves to help the victorious studio tap into new international markets.

"Besides improving the perception of our company we subsequently adapted the competences of SlipShift," said Ahlers of working with Computec after the win, before offering some advice for 2012 entrants.

"In the beginning one should bank on established game structures," he advised. "Coming up with your own, unprecedented ideas is a good thing, but the most successful games are the ones that use existing ideas and refine them with fresh elements. As soon as you are established on the market you will be given more freedom for realising your very own ideas."

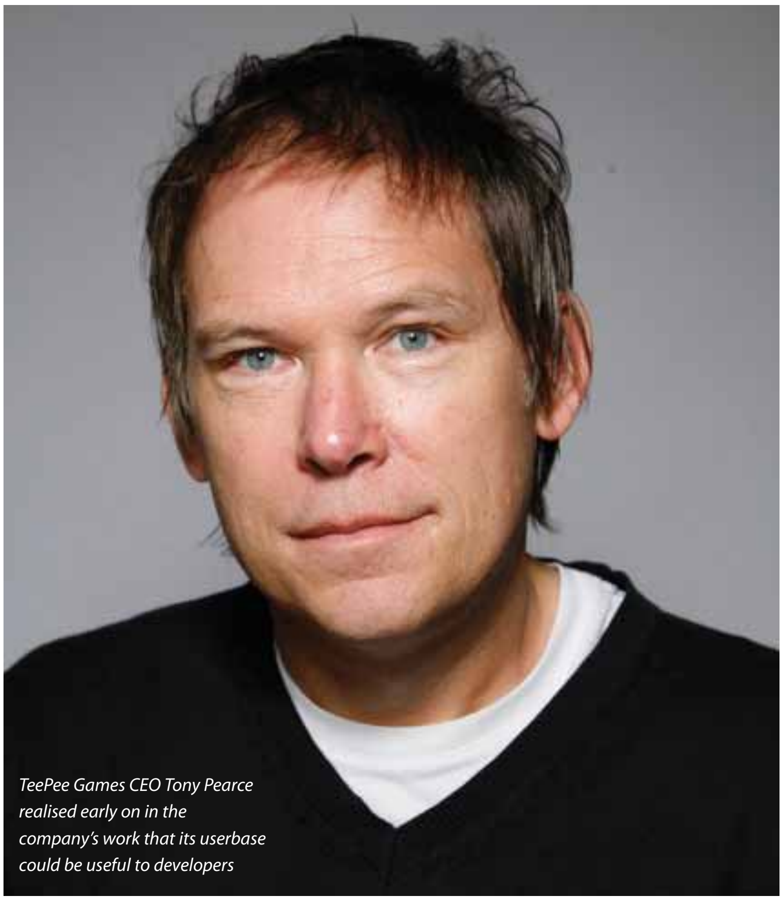
The winner's prize itself is divided into two distinct amounts; €250,000 as a non-refundable advanced royalty payment, and €750,000 of advertising budget to be used with Computec titles.

The Make the Game jury consists of Computec representatives, and names from across the games industry including Havok's VP of international development Felix Röken.

Interested parties have until April 16th this year to register at the contest's website.

The winner as selected by the jury – who confer in July – will be announced at the Gamescom event, which runs from August 15th to August 19th this year.

www.makethegame.de/en



TeePee Games CEO Tony Pearce realised early on in the company's work that its userbase could be useful to developers

TeePee debuts testing service

Recommendation engine outfit to offer developer-focused beta testing from specially recruited 'Super Users'

by Will Freeman

DISCOVERABILITY specialist TeePee Games is to expand its offering with a new developer-focused beta testing program, *Develop* can reveal.

Named Tomahawk, the service grants access to a specially recruited pool of members of the TeePee platform, which itself serves as a recommendation system that allows casual players access to the games best suited to their individual profiles.

The group of Tomahawk testers, named 'Super Users', will be made available to developers, at what promises to be a minimal cost, so that they can give early feedback on titles that are due to be published via TeePee.

The existing TeePee platform – available to users in browser and as a Facebook app – is built around a recommendation engine by the name of Geronimo, that uses social data, gaming profiles and behavioural analytics to recommend titles.

The company has also unveiled a new TeePee Loyalty programme, which has been designed to help retain users and to drive further acquisition through the use of 'social influencers'. Designed around gamification theory, TeePee Loyalty rewards players for participating it yet to be confirmed activities.

"TeePee Games has always strived to deliver something that is above and beyond, both in terms of actual content and technological innovation," explained CEO Tony Pearce. "The launch of the loyalty programme is in line with our Q2 plans for this year, whereby we aim to drive double digit user growth as we move into Q3.

"As well as this, we realised very early on that by leveraging the huge, varied and influential audience we have within the TeePee world, we could offer a service to our development clients that would benefit them in their work."

Presently TeePee has more than 350 Facebook games at its disposal, and has agreements with significant content providers and developers across the industry, including Zynga, Playfish and Digital Chocolate.

The launch date of Tomahawk is yet to be revealed.

www.teepeegames.com

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Scotland 'emerging as a globally important development hub'...

UK's northerly games industry hot spot to demonstrate show of force at GDC

Mike Shiel (inset) of Scottish Development international says areas like those on the Clyde waterfront are becoming increasingly important dev hubs

by Will Freeman

SCOTLAND IS FAST becoming a globally competitive games development hub.

That's according to Scottish Development International, an international arm of the Scottish Government, which is charged with attracting inward investment to the country while helping to promote its local studios' interests globally.

"To that aim we have 23 offices around the world, and we run various missions and exhibitions, GDC being an example of one of the biggest," said Mike Shiel, head of Creative Industries at Scottish Development International.

"At this year's GDC we'll have 18 companies and two universities represented at our stand. Then there's our Talent Scotland initiative, which offers a database of people locally and internationally who wish to work in Scotland, including a lot of people in the creative industries and video games development.

"Scotland has a long history in creative innovations and that has set it up well to emerge as one of the world's most important games hubs. This is where world leading games development is done."

Shiel also highlighted Scotland's communications infrastructure as a reason for company's globally to consider the country as a destination for data centres for cloud gaming, and pointed to the likes of Abertay University's on-going Prototype Fund as evidence of the high levels of investment in the region for start-ups looking for a home for their business.

> ***"At this year's GDC we'll have 18 companies and two universities represented at our stand."***
>
> Mike Shiel, SDI

Also in the SDI's toolbox are region specific initiatives like The Creative Clyde project, which, along with other gaming industry clusters such as Dundee, the organisation says demonstrate in a 'very tangible way' Scotland's track record in – and commitment to – supporting the growth of the sector.

"Alongside this, the future success of the Creative Clyde project in Glasgow depends to a large extent on SDI's proven ability to attract foreign direct investment," concluded Shiel. "It's a real partnership".

www.sdi.co.uk

...as UKIE opens Scottish base

Fat Bob Games' managing director Euan Mackenzie to head up UK trade body's recently established Scotland office

by Will Freeman

FAT BOB GAMES MD Euan Mackenzie is to head up the newly formed Scottish Office of UK trade body UKIE.

"Scotland has long been a world leader in the creation of games and interactive entertainment and we are pleased to announce that Euan Mackenzie will be heading up our Scottish Office," confirmed UKIE CEO Jo Twist. "As head of Fat Bob Games, Euan knows first-hand some of the challenges facing the interactive entertainment industry in Scotland and he will be able to spread the benefits of UKIE membership to all Scotland-based developers and publishers."

Edinburgh studio Fat Bob Games specialises in mobile and browser content, and last year contributed for charity project Play for Good, which saw money generated by the app *Drop Catcher* donated to games industry charity Special effect.

UKIE's Scottish Office has been established to offer Scotland's development and publishing community support and services to ensure the area – famous for hubs like that at Dundee – can thrive.

"We will be officially launching our UKIE Scottish Office with an event this Spring but if anyone has any questions before then, Euan will be happy to help," added Twist.

Mackenzie can be reached on euan.mackenzie@ukie.org.uk.

www.ukie.info

Fat Bob Games MD Euan Mackenzie (left) is now also a colleague of UKIE CEO Jo Twist (right)

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//COMMENT: BUSINESS

Turning the corner

by **Rick Gibson**, Games Investor Consulting

Nick Gibson says that since the fall of Blur developer Bizarre Creations, 35 per cent of former employees have now moved overseas

GAMES INVESTOR Consulting's latest census of British games development companies for TIGA is now out.

Its headlines: The decline in UK games development headcount is continuing, albeit at a slower rate; brain drain took 40 per cent of jobs lost in recent years; and almost as many companies have failed as have started up over the last four years. This month I'll look at what's happened to UK games development and what to do about it.

A CLOSE CALL

Despite optimism about job growth amongst studios, the UK's games cluster overall is still contracting, albeit more slowly than in recent years. High profile big studio closures are well publicised, but many more tiny to mid-sized independents have failed, and companies of all kinds have downsized.

The closure of large studios has largely been driven by high costs versus other locations and, in some cases, exacerbated by under-performance of specific titles, mostly at retail. Other studios have closed or downsized for many and various reasons, including cost and performance, but also declining demand for work-for-hire contracts and failed attempts at self-publishing.

The UK's overall fall is far from catastrophic, and it still retains a strong foundation of triple-A studios, both independent and publisher-owned, creating world class retail product. With roughly ten per cent of development headcount lost in four years, this is nowhere near the 60 per cent decline experienced by France in the early 2000s.

France's lost games developers didn't stay in the country; they emigrated to build Canada's games industry. When Ubisoft began building its giant Quebec studio in the late 1990s, its staff relocated en masse, triggering a near-collapse in French developers reliant upon Ubisoft for 60 per cent of their financing.

The UK is nowhere near as dependent on one finance source, but we can now conclusively say Britain is experiencing significant brain drain. The census includes new data on staff numbers lost to it: Over 40 per cent of jobs lost between 2009 and 2010 went overseas, mostly to Canada.

Meanwhile, a map of Bizarre Creations' ex-staff shows that 35 per cent of contributors are now overseas, and that three times as many senior Bizarre staff left the UK as stayed.

> ***"If this new data does not put down the Treasury's astonishingly misguided mantra that British games staff do not leave the UK, nothing will."***

HEADHUNTING HIGH AND LOW

Finally, a new survey of British staff overseas (Canada and US) shows that a disproportionate number of senior staff are leaving the UK, taking under a month to be headhunted or find and accept a new job. If this new data does not put down the Treasury's astonishingly misguided mantra that British games staff do not leave the UK, nothing will.

Significant levels of new company formation combined with a few publishers still growing their UK studios have slowed the decline. 216 start-ups have launched since 2008, mostly focused on network gaming in its many forms. This is steadily changing the British games development landscape, where only 33 per cent of companies now work exclusively on retail product.

The start-up rate is encouraging, but is balanced by almost as many companies going bust. About ten per cent of 2010's start-ups didn't make it to 2011. Games companies fail for many reasons, but since many were focused on the supposedly booming market of network games, why did they fail?

There's no deficit in creativity, design and technical skills – the UK has always excelled in these. Arguably the problem is access to finance and a deficit in suitable commercial skills. Time and again I hear ex-founders blame platform choice, failure to find a market, and inadequate monetisation.

The silent killer is that studios have almost no access to finance in the period between coming up with an idea and taking it to market. While they may bootstrap the development or get prototype financing from Abertay University's fund, it is inadequate bank lending, sparse VC interest and inexperience in raising money that combine to create a finance gap for small studios, leaving no money to build an audience after burning through cash on production.

THE BRAIN DRAIN

So we have a picture of a UK industry with global quality console studios that is finally restructuring towards network gaming but still facing challenges. We have significant brain drain of disproportionately senior console staff to subsidised territories, and healthy start-up levels, but in conditions hardly conducive to staying afloat.

To slow brain drain, you need a measure to keep global companies' studios in the UK. To trigger a market for financing games (that will inevitably favour more sustainable network games), you need a measure around which new financial instruments can cluster.

To stop more companies falling into the finance gap, you need a significant fiscal intervention that doesn't tinker at the edges. France has added 500 new development staff since 2008. Ubisoft has been hiring in the country again, and it has also been experiencing a burst of start-ups, 20 per quarter at the last count. At the same time the UK has lost 1,000 development staff. The only major differentiation is France's 2008 tax credit. Can the UK government join the dots?

Nick Gibson is a director at Games Investor Consulting, providing research, strategy consulting and corporate finance services to the games, media and finance industries.
www.gamesinvestor.com

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//COMMENT: DESIGN

‘Universal’ Apps

by **David Braben**, Frontier Developments

Platforms like the PlayStation Vita offer an oppotunity for broader ‘universitality’ between platform ecosystems, suggests Braben

‘UNIVERSAL APPS’ on Apple’s App Store are great. As we all know the same app works across iPhone, iPad and iPod, so as a user you do not have to agonise over which version to buy if you have more than one of these platforms, as many now do.

This is not much of a practical change, as within the code of ‘non-universal’ Apps typically there are already components specific to different screen parameters, rendering and performance options, to cater for different generations of hardware.

The question is how universal are they/should they be, and can this principle be extended further?

At Frontier, we released two Universal Apps on the App Store at the end of last year, *Kinectimals* and *LostWinds*. But it highlighted to me that in many ways this covers quite different platforms – an iPad differs more from an iPhone than say, a non-Kinect Xbox 360 differs from a non-Move PlayStation 3. OK, from a software viewpoint, the iOS platforms are quite similar, but that is just a small part of the equation.

THE MATTER IN HANDS

The issue is the different styles of play. With an iPad, the tendency is to place it flat on a table or lap, whereas with an iPhone or iPod it is to hold it with one hand and use the other on the screen.

This alone tends to affect which control schemes work best, and can make a big difference to the difficulty of a game if you are not used to it. We learned this lesson with *LostWinds*, but the beauty of online sales is updates are easy. Only a few days after the update went live, the majority of users had already added it, which included a new control scheme as well as the old one, and this was very well received.

Even with the same interface, the usage cases can be different, but when it comes to ‘cross interface’ development, some big challenges arise for developers. We saw it a great deal with the Wii – where many games regressed to using the D-pad rather than embracing motion control – to make cross platform development easier. But in my experience true cross-interface development is much harder than cross-platform.

> **“One frustration as a developer is seeing someone restricted to playing on one platform, but unable to migrate to another.”**

There is a wider point on ‘universality’, especially for a cross-platform developer like Frontier, and that is how far we can extend it.

One big change is the commercial nature of making a game available on different platforms as a single purchase. I think this is a good thing as one frustration as a developer is seeing someone restricted to playing a game on one platform, but unable to migrate to another, even when the game exists on both.

Realistically, few people buy a game on multiple platforms, but many have the ability to play them on multiple devices if the opportunity presents itself. With the rise of high-powered mobile platforms like the high-end Android and iOS devices, 3D, and Vita, there is an opportunity for broader universality across ecosystems, though it will be a big commercial challenge.

SHARED WORLDS

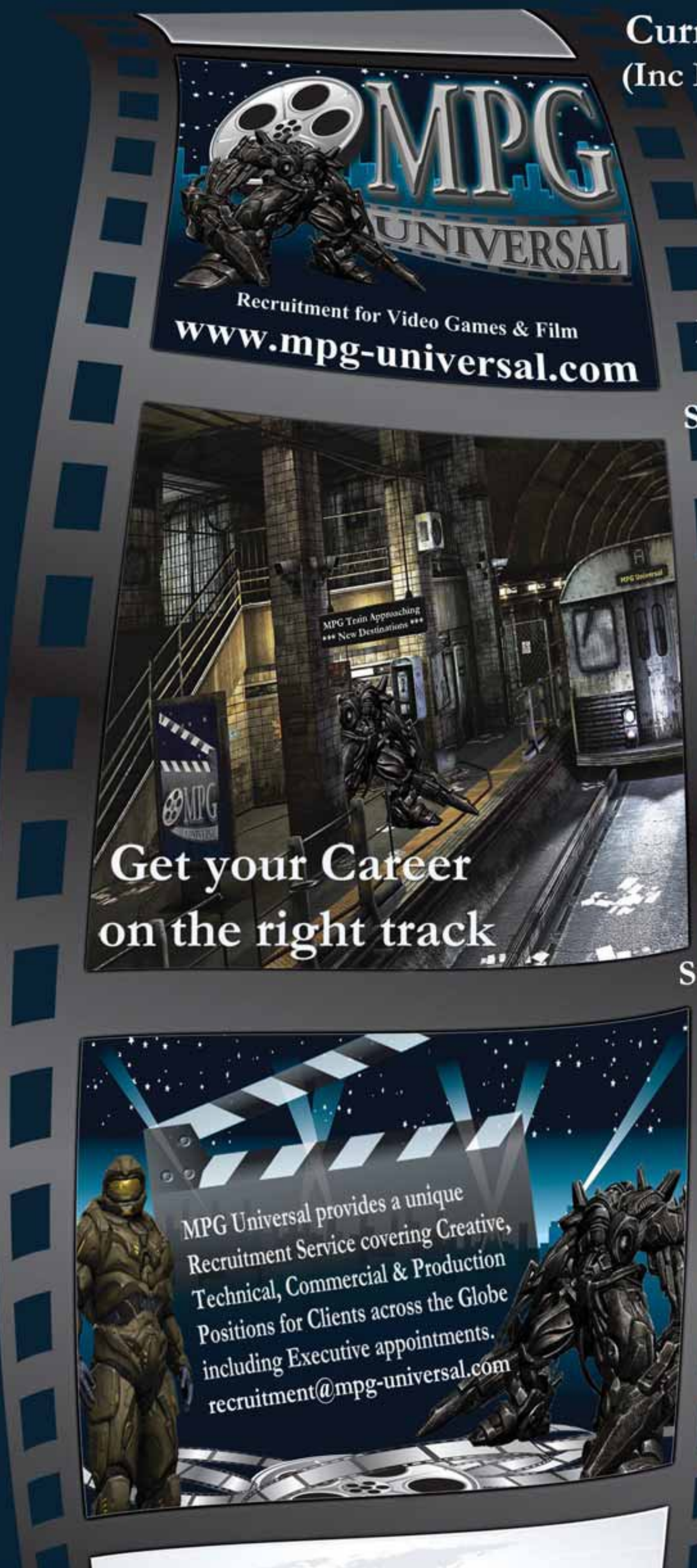
The presumption is this will not happen as these ecosystems are separated by a strict commercial divide, but even this is changing fast with interoperability across platforms – for example, *Kinectimals* across Xbox 360, Windows Mobile and iOS.

The big question is if or when free-to-play comes to console, do they share game worlds or are they separate instances?

If it is the former, then we truly could have universal apps with just one set of purchases – even if the actual code run by each platform is different. This does not address how funding is divided between those platforms to the manufacturers, given we would want an equivalent of the manufacturer levy. Perhaps this could be done by play-time stats rather like how the PRS operates in the music world?

Our industry is changing faster than ever.

David Braben is the founder of Frontier Developments. Best known as the co-creator of *Elite*, Braben has contributed to a number of other projects including *Frontier: Elite II*, *Thrillville*, *LostWinds* and *Kinectimals*.
www.frontier.co.uk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//COMMENT: MOBILE

Mobile Game Design 101

by **Will Luton**, Mobile Pie

Score x 1
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700

Will Luton says the most successful mobile games are the ones that focus on a single core mechanic and work on a playtime duration of minutes, rather than hours. Spilt Milk's Hard Lines offers a perfect example

THIS MONTH I'm writing about mobile design, for two entirely selfish reasons. Firstly, to prove that I am a creative and not just some money-hungry suit (which the regular reader may think).

Secondly, I want to help a specific type of start-up: The talent that comes out of a shuttered console studio. These new teams make the development community a more exciting place to be. Welcome, my friends.

However, sometimes, teams come out laden with ego and peacocking around the press, huffing and puffing words about 'console pedigree' that translate as: 'amateur hour is over, move aside shit munchers'. This will not win you friends. But, more importantly, these teams release rubbish games.

Wanting to help, I called my buddy Andrew Smith of Spilt Milk Studio, and we came up with a big list of design mistakes we've made and the ones we see others making constantly.

YOU CANNOT CORE-IFY THE CASUAL

The thinking is like this: core gaming is inherently better than casual and you can transfer new casual players to the joys of core with some half-way house or by dressing one up as the other. Don't do it.

Forget casual, forget core, but instead focus on the restrictions and the new opportunities in mobile. The way things always were are not the future.

SIMPLICITY

Players play mobile games in very short blasts and they pay very little money for them. Think minutes and minutes for 69p (or nothing at all), not hours and hours for £40.

Players aren't invested from the start, so they will ditch, negative rate and move on in an instant. Choose one simple core mechanic and make it great from the first minute.

LONGEVITY

Making a simple game is easy. Making a simple game that is fun beyond the first hour is tough. Either your base mechanic throws up continued nuance, complexity or dexterity requirements, or you build lots of content which produces it.

> ***"Forget casual, forget core, but instead focus on the restrictions and the new opportunities in mobile. The way things always were are not the future."***

If you decide to go down the content route, make sure you present it in such a manner that shows an obvious route through the game, clear goals and where there is replay opportunity. Study how the hits have accomplished it.

Players will not search for your content, so sign post everything you've made for them. Especially if they can't get access to it yet.

FORGET STICKS, BUTTONS AND PADS

Flick, tap, tilt; not click, push, yank. Touch screen is not better or worse than a controller, it's just different way of doing things. D-pads on touch screens are square pegs in round holes.

Plus, don't forget the rest of the toolbox: Location, microphones, cameras, gyroscopes, compasses, proximity sensors, multi-touch, bluetooth and multiple screens.

Ask yourself: Is there another way to do this better? The answer is yes, even if you don't know how yet.

DON'T FORGET PUBLISHERS

Self-publishing on mobile is a dream, yet the freedom can blind you. The constraints and advantages of having a publisher needs to be in your mind.

Make something that would be hard, but not impossible to get funded. Your investment is low and your risk is less, so your game should reflect it. It needs something exciting but not excluding.

Replicate publisher reviews by using the public. The public give the most honest feedback because they don't owe you shit. Run a closed Beta before launch and listen to – but not bend to – every comment.

If you stay in a vacuum you will end up releasing crap.

DON'T FIRE AND FORGET

Even more honest than the voice of the public is the actions of the public. Analytics is a big topic; half art, half science. Every single design choice you make can be validated or otherwise with the data you gather.

You don't need a sequel, react with an update. Keep improving and giving more until your game is dead or a hit.

WHAT VIRAL MARKETING IS NOT

Putting a Facebook or Twitter share link next to a top score is not making your game viral. People do not share arbitrary numbers with their friends. People share the cool, the incredible, the weird and funny, in both the real world and online.

TO CONCLUDE

In the two days in which I have taken to write this piece, two console studios have shuttered and others have trimmed staff in the UK alone. As sad as this is, it's forcing a huge, brilliant change.

Mobile – and social too – is a new world and it requires new thinking. You can probably find exceptions to all of the truisms I've written here, so what I hope you will take away is a set of thinking.

Forget forcing similarities in order to apply your advantage. The real benefit is found in looking for what is different, what has changed and what you don't know. There you can flourish and go on to make great mobile games.

If you think the trials of making console games equips you for mobile, history will repeat itself.

Will Luton is creative director at the award-winning boutique studio Mobile Pie. They create delicious own IP and work on licenses, with a partner list that includes the BBC, Orange and Hewlett-Packard. Follow Will on Twitter at @will_luton, or visit **www.mobilepie.com**

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THE MONTH AHEAD

A look at what March has in store for the industry and beyond

MARCH 2nd
Mario Party 9. Yet another party for Nintendo's mascot, who seems to be enjoying the celebrity life a bit too much.

MARCH 5th
Game Connection America. Providing an opportunity for industry professionals to network and do business.

MARCH 5th
Game Developers Conference. More than 18,000 attendees are expected at this huge industry event.

MARCH 8th
International Women's Day. Men traditionally 'honour' wives and even colleagues with flowers and small gifts.

MARCH 9th
Mass Effect 3. The blockbuster trilogy comes to a close... until the next set of sequels in the franchise.

MARCH 9th
Street Figher X Tekken. Could the next sequel feature *Mortal Kombat* and *Smash Bros*? We can hope/worry.

MARCH 17th
St Patrick's Day. Time to celebrate the famous Irish saint by drinking copious amounts of alcohol.

MARCH 22nd
World Water Day. Turning the world's attention to the serious problem of food and water wastage.

MARCH 23rd
Ninja Gaiden 3. Don the Dragon sword and cut your enemies down to size in a bloody mess. Again.

MARCH 23rd
Resident Evil: Operation Raccoon City. Like a good zombie horde, there seem to be lots of these games lately.

MARCH 28th
F2P Summit. Speakers discuss the benefits of the free model and how devs can take advantage.

MARCH 31st
MCM Expo Birmingham. Yet another chance to let your inner fanboy loose with more Cosplay shenanigans.

DEVELOP DIARY

Your complete games development event calendar for the months ahead

nordicgame
PLAY ARCADE

NORDIC GAME 2012
May 23rd to 25th
Malmo, Sweden
nordicgame.com

The ninth Nordic Game conference brings together developers in the region to showcase their latest projects.

The event will include an Indie Night, the Nordic Game Awards, as well as the main conference tracks. Speakers scheduled to keynote include Square Enix art director Jonathan Jacques-Belletête and Secret Crunch director Ste Curran.

Organisers are also promising to introduce new elements to the event, including an enhanced career and recruitment focus

MARCH 2012

GAME DEVELOPERS CONFERENCE
March 5th to 9th
San Francisco, US
www.gdconf.com

INDEPENDENT GAMES FESTIVAL
March 5th to 9th
San Francisco, US
www.igf.com

GAME CONNECTION AMERICA
March 5th to 7th
San Francisco, US
www.game-connection.com

F2P SUMMIT
March 28th
London, UK
www.f2p-summit.com

MCM EXPO BIRMINGHAM
March 31st to April 1st
Birmingham, UK
www.birminghamcomiccon.com

APRIL 2012

LAUNCH: MEET THE PRESS
April 4th
Birmingham, UK
www.launchconference.co.uk

THE GADGET SHOW LIVE
April 11th to 15th
Birmingham, UK
www.gadgetshowlive.net

FESTIVAL OF GAMES
April 19th to 20th
Utrecht, Netherlands
www.festivalofgames.nl

MAY 2012

DEVELOP QUIZ 2012
May 16th
London, UK
www.develop-online.net

CASUAL CONNECT ASIA
May 22nd to 24th
Suntec, Singapore
asia.casualconnect.org

NORDIC GAME 2012
May 23rd to 25th
Malmo, Sweden
nordicgame.com

JUNE 2012

E3 EXPO
June 5th to 7th
Los Angeles, US
www.e3expo.com

UBIQ PARIS
June 18th to 19th
Paris, France
www.ubiq-europe.com

GAME HORIZON
June 27th to 28th
Newcastle, UK
www.gamehorizonconference.com

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If you were to improve your game development skills, would you take advice from the creators of Doom, Quake, Rage, Might & Magic, Sword & Sorcery EP, Critter Crunch, Bastion, Super Meat Boy, Fez, Chime, and Just Cause 2? Thought so.

Nordic Game 2012 presents:

Tim Willits
id Software

Jonathan Jacques-Belletête
Eidos Montreal

Nathan Vella
Capybara Games

Amir Rao
Supergiant Games

Phil Fish
Polytron

Ste Curran
Secret Crush

Emil Persson
Avalanche Studios

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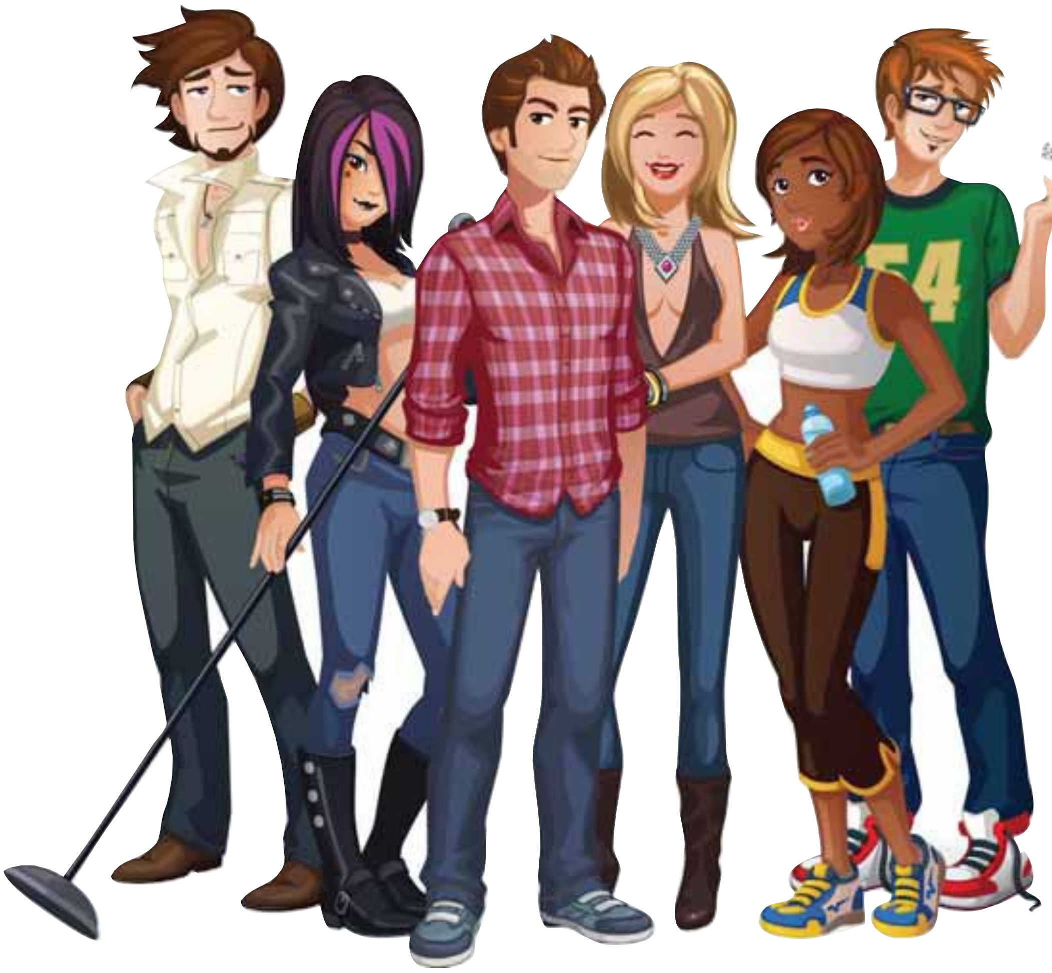
The 10 F2P games you **must** play

(And steal ideas from)

Getting free right isn't easy. Fortunately in March there's two ways to learn how to do it right; the forthcoming F2P Summit, and – inspired by the event – **Jon Jordan's** motivational list of the world's finest free-to-play games



ALTHOUGH WE CONSIDER free-to-play games a fashion that's exploded in recent years, it's actually been around for over a decade, especially in Asian countries hamstrung by piracy and access to PCs.

It was the likes of MySpace and Facebook that kickstarted the market in the US and Europe, however. And now with mobile platforms dominated by the model, it's truly cross-platform and global.

So, with the first F2P Summit kicking off in London on March 28th, let's take a look at ten of the most interesting games that let you play for free, if only because they are happy to lighten your wallet in return for your enjoyment.

RuneScape (Jagex)
Arguably the most successful UK game of that decade, *RuneScape's* release back in 2001 meant it's not what we'd now consider a pure free-to-play title. Instead of micro-transactions, it is monetised via a monthly subscription payment; much more friendly in terms of its young audience. It claims ten million active accounts per month, and 156 million total registrations.

Crazy Racing Kart Rider (Nexon)
Released in 2004 in Korea, *Crazy Racing Kart Rider* is one of the best early examples of casual free-to-play based on micro-transactions. Inspired by *Mario Kart*, the multiplayer PC racer was a massive domestic success, also going on to international glory with over 230 million players to date.

Mobsters (Playdom)
Hey, do you remember when MySpace was the hottest social network on the planet? Yeah, way, way back in 2009, Playdom's mafia game was the don on the platform that News Corp dropped $580 million on to acquire.

FarmVille (Zynga)
Not the first in the genre or on the platform, but Zynga's social time management game remains the title that's come to define free-to-play Facebook gaming. Love it or loathe it, this is where the *Ville*-style grew from, and even if the mechanics and graphics now seem dated, it remains massively popular.

GodFinger All-Stars (ngmoco)
Not as well as known as the ngmoco-published *We Rule*, nevertheless *GodFinger* was an interesting approach to free-to-play gaming on iOS. Taking more of a core gamer attitude, it combined god game mechanics with a neat 2D sidescrolling playfield that incorporated terraforming elements.

Words With Friends (Zynga)
An interesting release, considering the developer's past experience at RTS-heavy Ensemble Studios, *Words With Friends* is the prime example of taking a well-loved boardgame mechanic and sprinkling it with the gold dust of asynchronous multiplayer.

Smurfs' Village (Capcom)
One of the big surprise stories of 2010, Capcom's skill with *Smurfs' Village* was realising the value the previously ignored licence possessed, at least for a certain age of players. Yet for those very reasons, it also became a lighting rod for wider concerns about the virtual goods business model, resulting in Apple tweaking its iTunes log-in process. It has since become successful on Facebook.

Tiny Tower (NimbleBit)
Proving that even two-man indies can get in on the free-to-play action, US outfit NimbleBit actually prototyped *Tiny Tower* without any in-app purchases to ensure it was fun to play. Combined with excellent sprite graphics and obvious attention to detail, its reward was being Apple US's Game of the Year, boasting over one million daily active players.

The Sims Social (EA/Playfish)
Following its $400 million acquisition in 2009, Playfish has led EA's casual business, with an increasing focus on bringing the publisher's brands to Facebook. Its biggest success has been *The Sims Social*, which quickly became one of the platform's most popular games, with over 20 million monthly active users.

My Horse (NaturalMotion Games)
From middleware based on AI-controlled animation to a free-to-play iOS game about horses, UK outfit NaturalMotion's business has clearly taken a new direction in recent years. Now focused on the smartphone freemium sector, the high-end graphically realistic 3D game *My Horse* has been a big hit, with over seven million downloads and over 500,000 daily active users grooming, feeding and treating their equine pets.

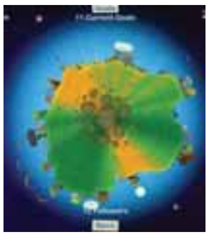
THE F2P SUMMIT

The F2P Summit will explore everything game developers need to know about free-to-play strategy and how they can make it work for them.

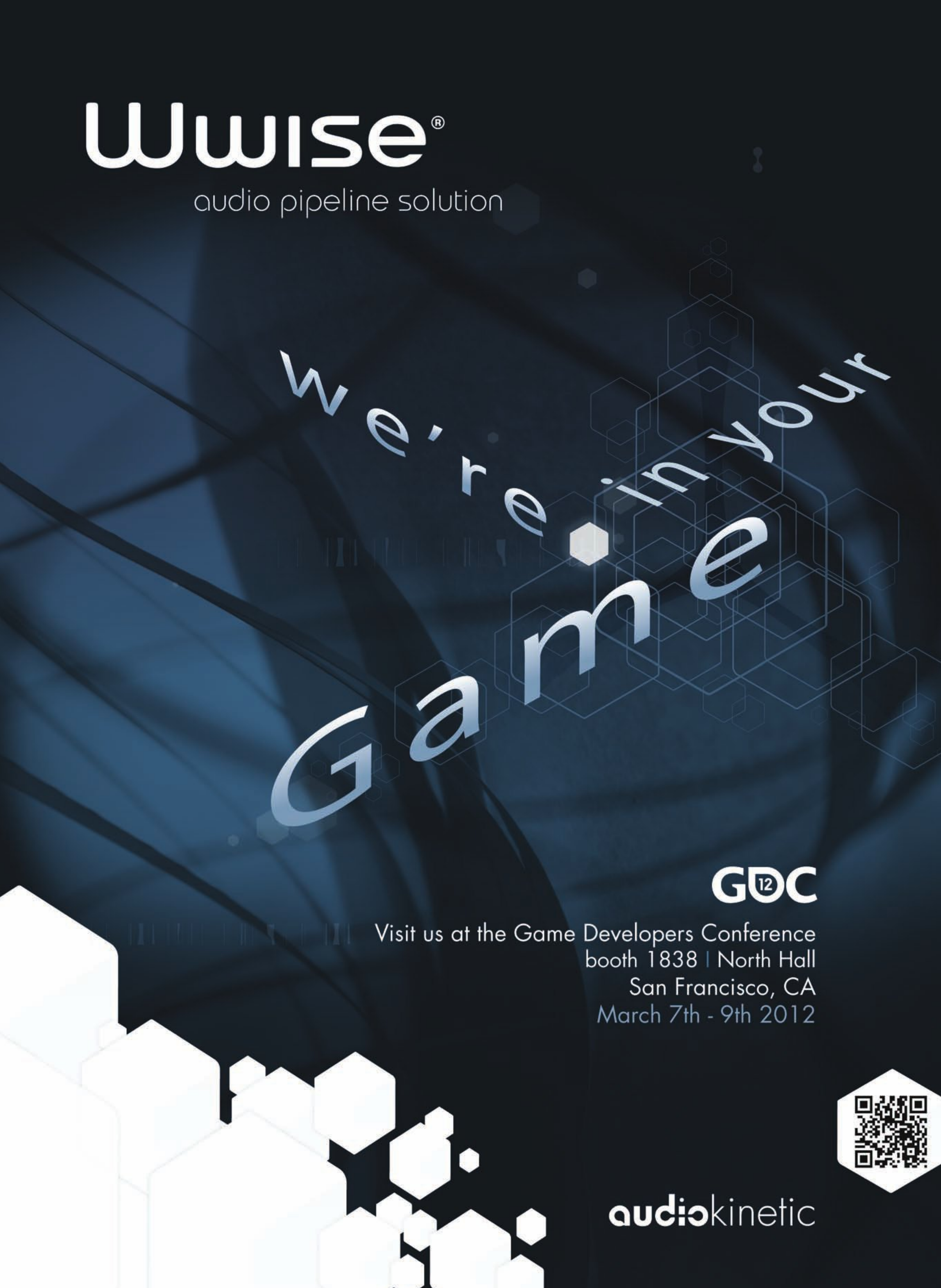
Created with independent developers, traditional publishers, IP and media owners as well as brand marketers in mind, topics will include:

- User acquisition
- Effective customer retention
- Community management
- Monetising business models
- The differences between the App Store and Google Marketplace

Date: March 28th, 2012
Venue: Rich Mix, London, UK
www.f2p-summit.com



The Sims Social (main image) is EA's biggest casual title yet. Other free-to-play triumphs include FarmVille (centre) and iOS hit GodFinger All-Stars (bottom)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DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

Inside Indie Game: The Movie

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Crowdfunding triumph

Tim Schafer proved new wave funding platforms work. But how can YOU use Kickstarter? Turn to p28

Outsourcing in the spotlight

p35

The sound of Sesame Street

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Region Focus: The Middle East

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Shooting games

A duo of filmmakers have created a project that cuts to the very heart of what it means to be a games developer. They spoke to **Michael French** about their documentary, Indie Game: The Movie

The creative duo behind Indie Game: The Movie: Lisanne Pajot (left) and James Swirsky (right)

MEET THE hottest duo in indie games: Lisanne Pajot and James Swirsky.

Since 2010 they have worked tirelessly on a Kickstarter-funded project with a growing audience of gamers and developers. They have already won awards and critical plaudits. A TV deal has been done. And at GDC their work will finally be showcased to the industry.

But their creation is not a game. It's a movie about making games.

Develop readers are an astute lot – you probably know a fair bit about *Indie Game: The Movie*. You might even have been one of those who threw a few dollars in the pot to get it started. You might have met Pajot and Swirsky at GDC when they scoured it for interview subjects. You might even be one of the interview subjects.

But what you might not realise is how much the movie, and its creation, holds up a mirror to how interactive electronic entertainment is made. We might still be waiting for the game equivalent of *Citizen Kane*, but *Indie Game: The Movie* might just be the game development's *Citizen Kane*.

> ***"When we did this documentary it blew us away that this movie didn't actually exist. No one had told the designers' story."***
>
> James Swirsky, filmmaker

The timing of Indie Game: The Movie's arrival couldn't be better.

'Indie games' are more prevalent than ever. So much so that the phrase is more elastic and abused than at any other time, used to all-at-once describe those resurgent bedroom coders working on PC games, iOS devs with years of experience who left the confine of a safe corporate studio, 15-year veterans who run 50-strong teams working with publishers on and off… and students.

'Indie' has stopped referring to the developers who take matters into their own hands to craft games that are either uncommercial, uncompromising or underground, it now refers to those games released without mainstream publisher support. In an age of games made for smartphones, Facebook or digital distribution, indie is almost the majority amongst games development.

Indie Game: The Movie boils back down to the core of what making an independent game is all about by focusing on people behind productions that put indie games on the map. In actual fact, it aims to boil down to what making a game is about, no matter

The film at times shows devs like Team Meat's Edmund McMillen at their most vulnerable

your commercial position. The film looks at the pressure on *Super Meat Boy* creators Edmund McMillen and Tommy Refernes, *Braid's* Jonathan Blow and up-and-coming designer Phil Fish and his game *Fez*. But really, the overarching story is the struggle it takes to put together anything even remotely creative.

Lisanne Pajot and James Swirsky told us about the documentary:

LP: *When people watch the film, I hope that whether they are a filmmaker, or a web developer, or a musician, they will take something form it. When you watch someone struggle it's… well, it's comforting. There are disappointments on the road to a good work. It's not easy to make something, and it's reassuring to see other people have a hard time.*

JS: *Even though this movie is very much the story of Ed and Tommy, it's also very much our story. And many other peoples' too. We were a two-person team using accessible technology to film individuals making something with accessible technologies that they would pour their heart into before releasing it to the world. In turn we poured our hearts into releasing their story into the world. So that's not lost on us. We didn't exactly realise it at the time, but we were essentially filming ourselves six months in the future. We'd be filming Tommy and Edmund crunching to hit their Microsoft deadline date, and there we would be doing the same thing to hit our Sundance deadline later on.*

SHINING A LIGHT

But a deep emotional look at the universal act of creation isn't *Indie Game: The Movie's* only virtue. It offers to throw a light on a world which many, even those in the industry, don't understand.

LP : *You really see people pour their hearts into these games and you see the heartbreak and jubilation that comes from that.*

JS: *When we did this it blew us away that this movie didn't actually exist. No one had told the designers' story. Games are a massive industry. But we have all these documentaries about film making and the music business, but not video games. The documentaries there are always about players, or Second Life, or how games are damaging.*

Turning the art of coding into compelling footage has not been without its challenges – which goes some way to explain why this hasn't been done before.

JS: *Video game development is inherently un-cinematic. It's…*

LP : *…it's ugly.*

JS: *It's people sat at computers for stretches of time. And when you have indie games development it's just one person at a computer for a long stretch of time, so there's not even an interpersonal dynamic going on there. You don't see the immediate drama or story.*

LP : *When you approach making a film, you're told to ask what's going on, work out what happens, or else it's just a number of people talking.*

> ***"You really see people pour their hearts into these games, and the heartbreak and jubilation that comes from that."***
>
> Lisanne Pajot, filmmaker

JS : *And in making games, drama isn't always guaranteed. We knew it was there, having heard all the stories while at GDC, but the question was whether or not you can capture it with a camera.*

THE MESSAGE

But going by the accolades, *Indie Game: The Movie* has captured that drama perfectly. And it's done so to the extent that it could even help educate audiences untouched by video games.

LP: *At every screening it felt like someone in the audience had an epiphany – they would raise their hand after and tell us what it was about. 'So these people who make the games – they are artists too, right?' The film never talks about art, the word art is never used. But still, it has turned a light on in people's heads.*

They see what these people go through to make games. And funnily, a lot of the people who responded in that way were women, aged from 30 up to 60.

JS : *And older gentlemen. It seemed people over 30 really had their eyes opened. They would come up and say 'I'm not a gamer' or even 'I hate games, but' and then step up to acknowledge how they had learned about games, or saw them in a new light, or might even go out and buy Super Meat Boy.*

LP : *We had a lot of developers attend the screenings at Sundance. Even though every game is different, and every team is different, we have seen people come to the film and respond to it, or appreciate what's on screen. Because our movie is just about one or two guys in a heightened situation and a dramatic soundtrack – it's a dramatic film. I was worried the people in the wider industry wouldn't get it, but they did.*

JS : *We really had to strike the right balance, and so far so good. But the real test will be the showing at GDC.*

The opening day of GDC this year will finish with a screening of *Indie Game: The Movie* to attendees of the Indie Games Summit, the very birthplace of the documentary.

It promises to be a defining moment for the film, the sort of narrative climax too perfect for even the most uncontrived screenplay.

JS : *It's extremely exciting and stressful. This is the best possible audience in every way to ask for – but it's also a huge test because it's their story. It might be Ed, Tommy, Phil and Jon's story on screen - but everyone in that room can relate to it. So the reception there will be the real test. We're pretty optimistic going in, but this audience knows what is talked about, and there will be 500 of them there with microphones.*

LP : *I think people in the industry get what we're trying to do – make a movie for them, but also for a broader audience. That's why, for instance, a lot of technical stuff hasn't been included.*

Don't be fooled. The film wasn't devised to satisfy an ulterior motive on changing how games are perceived – it was to tell the stories of three developers.

To tell the stories that populate *Develop* every month, pepper forums each week, and keep Twitter chattering around the clock.

And yet… Pajot and Swirsky are hopeful that they can teach the world about what it means to be a developer, as well as what a developer does. Gamers, after all, more often than not only hear about the game, not the game developer.

LP : *To random people on the street when it comes to the games that they play, the person that makes it isn't on their mind – I'm sure that's true for most games and most teams.*

JS: *There seems to be two camps - an audience that doesn't think about them or doesn't want to, and an audience that does. But what we're hoping to show is that there is an immediate connection between a developer and their game.*

If you see our movie, and understand how the developer crafted that game, then play their game, your experience will be richer. People will appreciate more if they understand what went into the passion that goes into any game.

www.indiegamethemovie.com

BEHIND THE SCREENS

Indie Game: The Movie was shot over a number of months from mid-2010 onwards. Although the final cut only focuses on three games productions, film-maker duo Pajot and Swirsky filmed over 20 developers - even more if you include the number of game jams they attended.

"We were shooting a lot of material, but as we were going, the timelines started to line up with the development of *Super Meat Boy*, and *Fez's* first showing at PAX," explains Pajot.

"The original cut of the movie had four other developers in it but it was three hours long."

Also on the cutting room floor; much of the footage of actual coding.

Pajot adds: "There is some computer work shown. But the heart of the film is the emotional journey of creating something. It's about how people pour their souls into something and how people understand it on the other side. I think that's why we've had such a positive response to it at places like Sundance, where like-minded people have faced the same struggle."

Independent film festival Sundance offered a strong debut for the pair. *Indie Game: The Movie* won a festival prize for documentary editing, and during the week-long event it was announced HBO planned to adapt the concept into a dramatic TV show.

Not bad for a film about a technology subculture made with a small chunk of change made from crowdfunding site Kickstarter.

This whirlwind Cinderella tale even has a bit of dramatic irony - Swirsky had once turned his back on a dev career, having once been a tester for EA Canada.

He explains: "I grew up as a gamer, back before when they called gamers. Up to a while, until… I worked in QA. That was the death knell for my love of video games. At the end of that, which was a horrible job, I went away from games for a while. It wasn't until we went to GDC for a corporate video filming that I rekindled my love of games."

THE WISDOM OF CROWDFUNDING

Indie Game: The Movie did it. And now Tim Schafer has cashed in too. Is Kickstarter really all it's cracked up to be?

GAME: THE MOVIE was funded in part using crowdsourcing site Kickstarter. Pajot and Swirsky raised $23,341 on the site after posting a pitch and details of the movie they wanted to make. They raised, in fact, $8,341 more than their original proposed funding budget of $15,000.

Of course, you know about Kickstarter. Every developer has this month has heard about it after famed designer and Double Fine founder Tim Schafer sought $400,000 to make a new point and click adventure game with former LucasArts colleague Ron Gilbert. Thousands of fans invested around $50 each within hours, propelling the fund past its $400,000 target immediately. In a day it had phenomenally raised $1m. At time of writing it's at $1,739,588 with 28 days to go, with 50,190 having invested anywhere from $15 each up to $10,000 or higher for pledges that offer perks such as lunch with the developers.

CASHING IN

Hyperbole on the wave of cash has come quick and fast. It's the defining moment of the year for games already, predict some; it's changing the model for funding, claim others. The more fanciful claims say this is gaming's 'Radiohead moment', referring to the UK band's pay-what-you-want strategy for a suddenly released album (hopefully our description alone there can help you understand how the two are nowhere near similar).

Double Fine's own pitch is similarly enthusiastic: "For anyone interested in the inner workings of the game industry, either professionally or as a fan, this project will be a landmark in exploring the art of development."

> **Kickstarter is a tool to create a campaign to get your project done. But it's not a place where people are trolling to donate money.**
>
> Lisanne Pajot, film maker

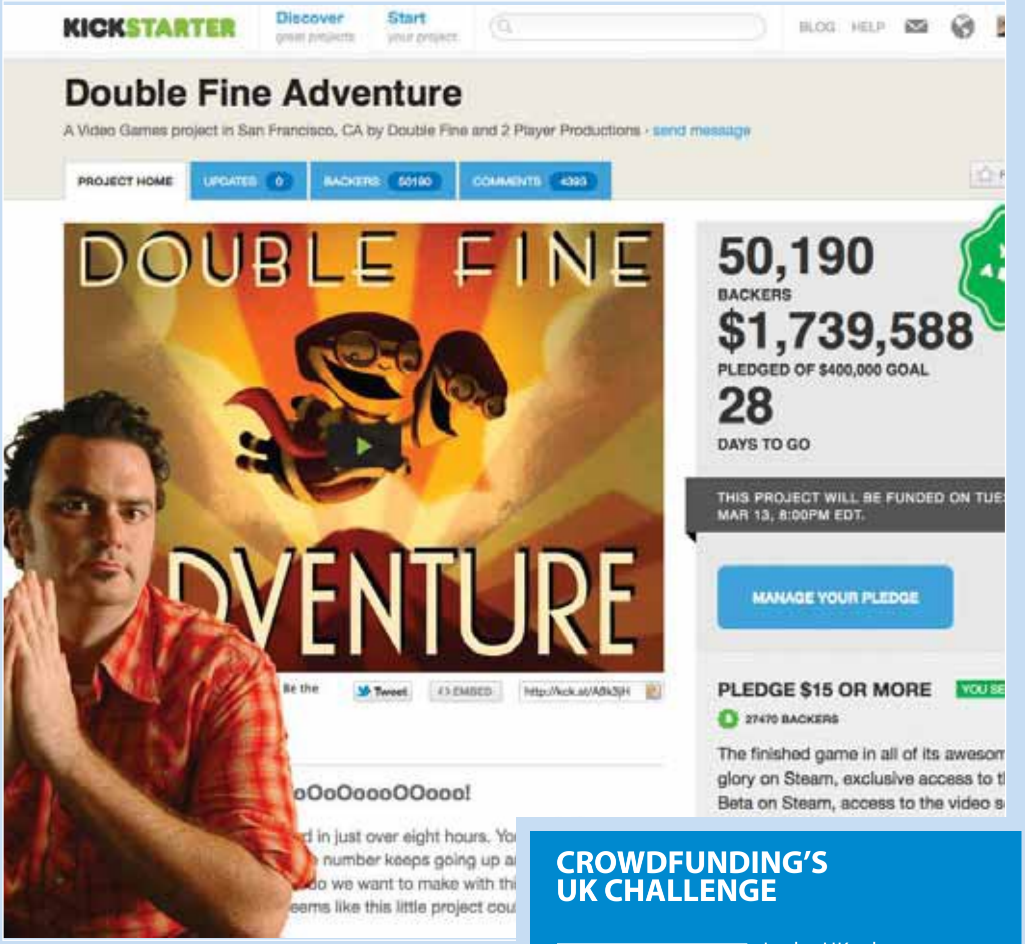
Certainly, the success for Double Fine is not to be ignored – and this is shaping up to be the most public, openly developed game with a huge budget.

But this singular success needs to be understood with some reasoning. Tim Schafer's big money boom on the site is just a one-off; a blip driven by the word of mouth that only top-flight status as an iconic designer can encourage.

Less hyped projects from less reputed developers simply won't attract that amount of money – and you would be foolish to think the site is a goldmine. Just ask the makers of *Indie Game: The Movie*, who say that instead Kickstarter is best viewed as a part of an overall dialogue with fans.

"Kickstarter is a tool to create a campaign to get your project done. But it's not a place where people are trolling to donate money," explains film maker Lisanne Pajot.

"No one is ever looking to donate money or give you cash," adds co-director James Swirsky.



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"Kickstarter is just a place - it's not a massive money generator. We had to put two months of pre-work into our first kick-starter campaign, and just as much or more for our second. You have to set all those networks up beforehand, and when you launch you want to have your contacts list ready, and your blog distribution list ready. You need to give people a reason to talk about you, you need a good pitch video, you need to show that people should be interested in what you want to do as well as what you can do.

"I'm sure that's where a lot of things stumble - the pitch isn't strong enough, or they haven't made it clear enough what their objectives are. Some people think Kickstarter is just a site that can get you free money, but there's a lot of work that goes into getting people there."

Pajot adds: "Our first campaign on there was definitely how we gained momentum but to get that you need work. If you're doing open development, you need to maintain constant communication because people want to know how you're spending their money. It creates another layer, another conversation on top of what you're already doing."

Swirsky: "Then once you're done, there is real post-campaign… I don't want to call it maintenance, but it is something you need to maintain. You need to keep the conversation going."

Pajot concludes: "And you have to be willing to do that. You can't do a Kickstarter campaign, take the money, and then go away and never say anything for two years. You have to be ready to talk. A lot."

CROWDFUNDING'S UK CHALLENGE

In the UK, there are many businesses offering crowdfunding or crowdsourcing platforms such as www.sponsume.com, www.wefund.com, www.crowdfunder.co.uk, www.pleasefund.us. But it is restricted by the current legal and regulatory framework in Britain which limits the potential of investing in projects for financial reward. The barriers exist to protect consumers from risk or fraud.

Trade body UKIE is in the midst of finishing a Crowd Funding Report and Access to Finance proposal for the government that offers a way to improve the regulatory environment so fans, content producers and crowdfunding platforms can take advantage of the increasingly popular funding method.

UKIE chief executive Jo Twist told *Develop*: "Crowdfunding offers a fantastic new way for companies, especially start-ups, to fund their projects and grow their businesses. We are already seeing many crowdfunding models and platforms being used; UKIE's Crowd Funding Report will recommend how the UK's current regulatory environment can be improved to further allow fans, content producers and crowdfunding platforms to all take full advantage of this exciting new way of getting money and rewarding fan loyalty."

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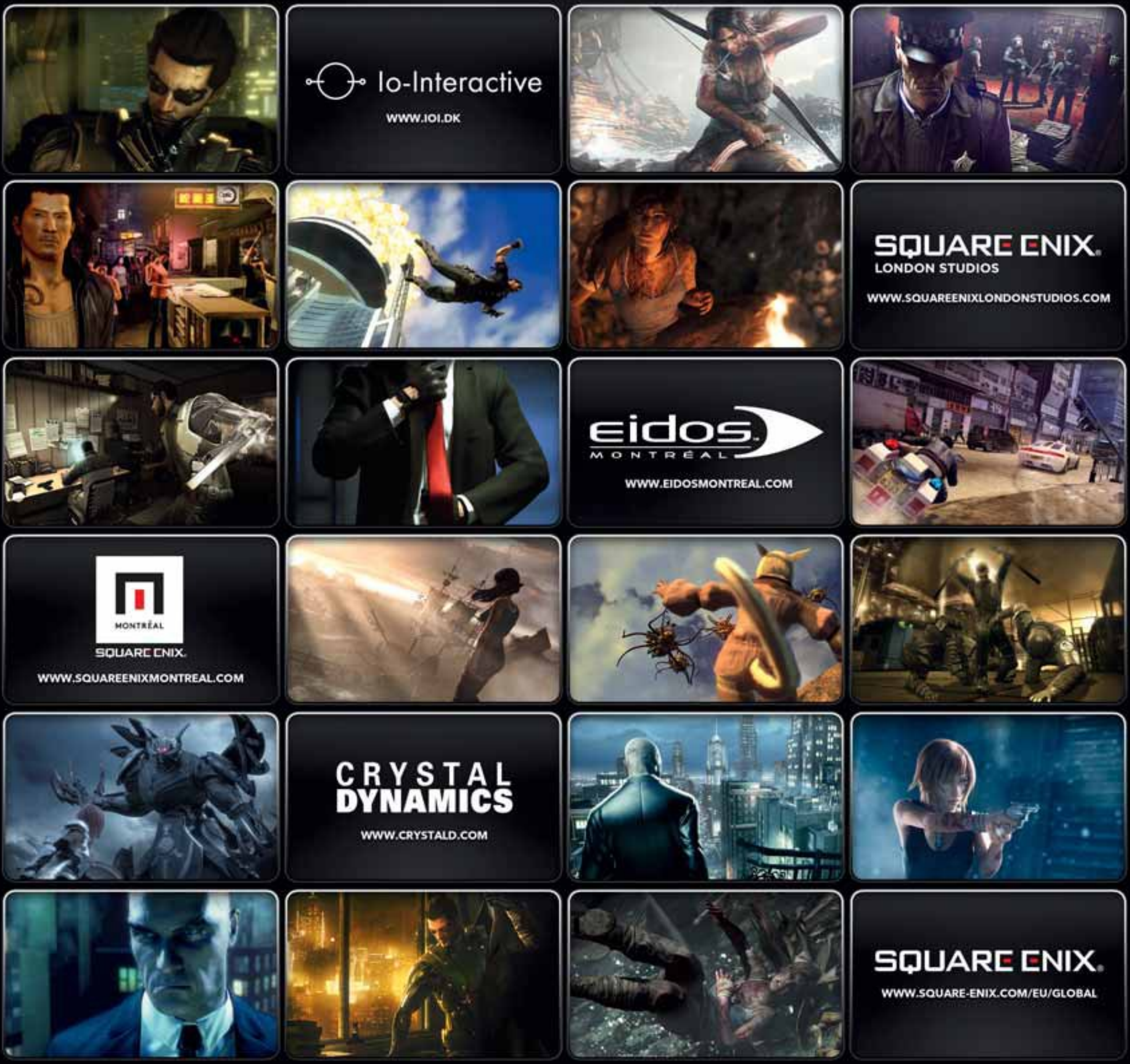
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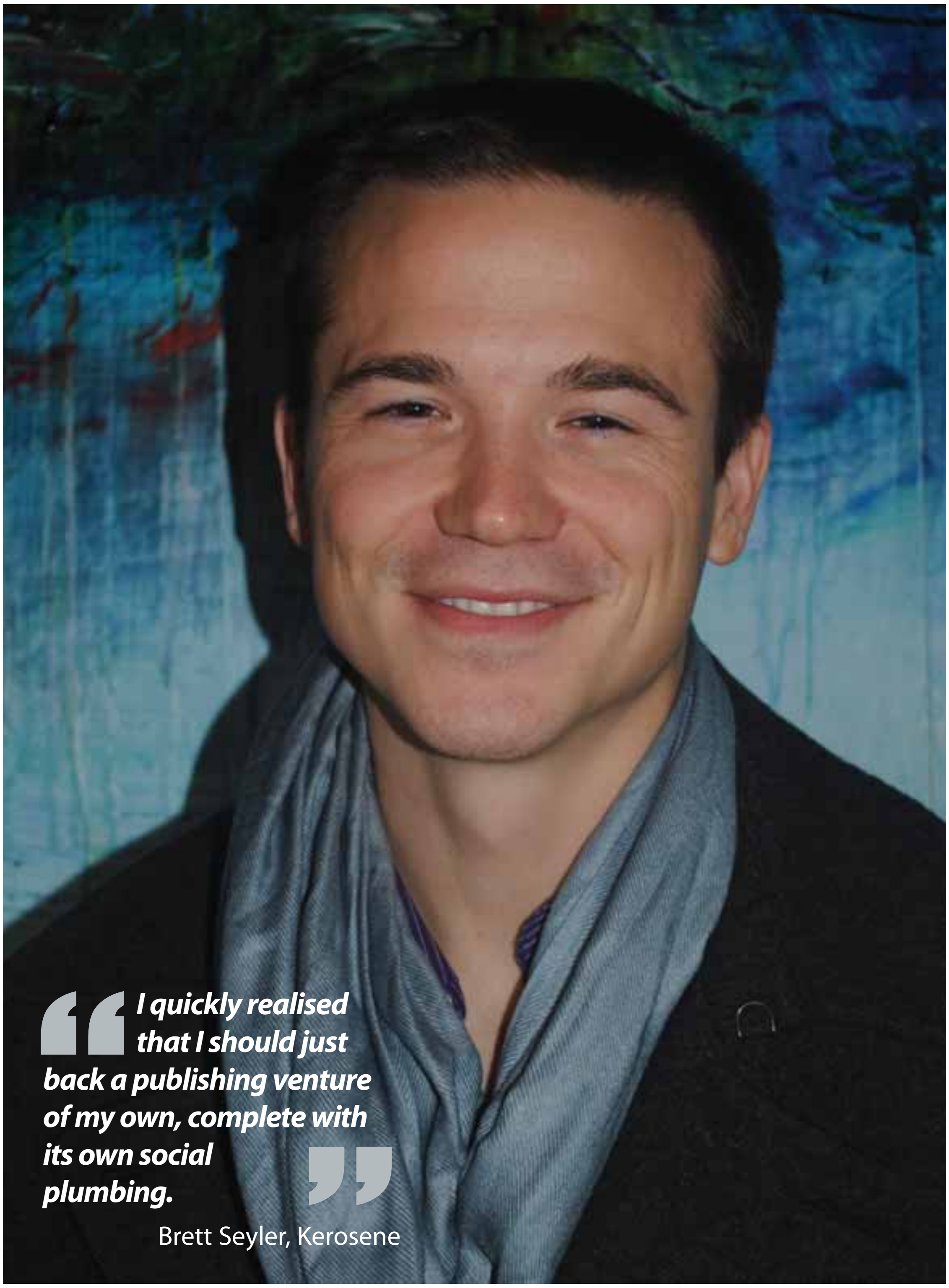
Publishing Refuelled

Why did Brett Seyler leave a strong firm like engine outfit Unity? To start a new developer-centric publisher named Kerosene, he tells **Will Freeman**



Many mobile publishing offerings lack the sophistication required, claims Kreosene founder Brett Seyler

> **“I quickly realised that I should just back a publishing venture of my own, complete with its own social plumbing.”**
>
> Brett Seyler, Kerosene

LAST TIME DEVELOP caught up with Brett Seyler he was the general manager of Unity’s egalitarian Union publishing initiative.

When he left the popular engine outfit amicably last year he all but vanished, taking himself out of the spotlight to work on his next project. For months he gathered resources and undertook research, expanding on years of study while readying something that remained a mystery to the rest of the industry.

And now, *Develop* can reveal, the former Garage Games man is ready to lift the lid on his newest venture; a developer-centric publishing infrastructure for mobile games studios by the name of Kerosene.

The origin of the concept of Kerosene came about as Seyler began to consider how he could do more to help a number of mobile developers in which he had personally invested capital. Working with these companies, he found himself relishing the sector’s unstructured, unconsolidated nature, but was equally dismayed by the limitations imposed by existing publishing methods.

“As soon as I left Unity, I knew I’d want to help give some of these studios the luxuries and advantages of larger studios with great publishing technology and services, data science and design expertise,” Seyler tells *Develop*. “So, in rolling all that up, and sharing it across multiple studios, I quickly realised that I should just back a publishing venture of my own, complete with its own social plumbing, analytics, user acquisition partnerships, and so on.”

And so it was that Kerosene was born, and Seyler’s vision to offer a mobile-focused game publisher with a ‘new school’ approach to helping developers was realised.

TOOLS FOR THE TRADE

Presently focused on iOS and Android, Kerosene essentially offers studios a suite of tools and services that can be integrated at various stages of a games development in a variety of ways. That on its own isn’t a unique proposition, but Seyler is confident he can offer enough to make Kerosene a distinct publishing model.

In conversation Seyler mentions certain core values over and over; he insists there is a devotion to developing IP and story, an emphasis on keeping customers interested through quality of gaming experience rather than ‘click addiction’ mechanics, and a respect for the developers that he believes larger publishers fail to prioritise.

And then there’s the technology itself.

“The technology is what separates it from being a normal publisher,” Seyler asserts. “I wanted to help with the same problems so many studios are facing; the ones in the App Store to do with managing their games and customer bases and deal with user acquisition.

“I spent a lot of time looking at publishing options for the studios I’ve worked with, and I just didn’t like what I saw. There just hasn’t been much sophistication around user acquisition for publishers willing to really work fairly with third party games.

“There’s not been the tech infrastructure that developers need right out of the gate to build truly social games, or at least to use truly social mechanics.”

Seyler is confident that numerous studios are capable of designing those kind of games. But he believes that a lack of quality social plumbing in the mobile space means it has been hard for them to learn from the most valuable lessons in the online space.

Kerosene can change this, he claims, and in doing so bring to being a new category of games for mobile – those illustrious ‘gamer’s games’ that he defines as “fun to play, hard to put down, with lots of passive progress and multiplayer engagement”.

Seyler repeatedly compares the current social mobile space to the early days of

lumaARCADE
BLADESLINGER
lumaARCA
BLADESLINGER

One of the first games Kerosene is to publish is Bladeslinger, itself built in Unity, and a new poster child of triple-A on mobile and tablet

Facebook gaming, when studios were faced with a new realm in which to master their craft. And he believes his time at Unity can help turn that hostile frontier into fertile land.

A NEW FRONTIER

"As a company we were trying to think of game-agnostic ways to help all that content we were seeing excel in the market," says Seyler of Unity. "We came up with some technical solutions and some service solutions, and I did a lot of research for Unity in the space, so it became pretty natural that when I left I knew what the best third party solutions were, the problems for which there were no third party solutions and roughly how much work it would take to build those."

From then for Seyler it was a matter of building what he calls a 'unified stack' for the likes of analytics, user acquisitions, social plumbing and a game-agnostic back-end, mixing third party tech with an amount of proprietary tech.

Like many other digital publishers, Kerosene will deliver the game in the typical manner under its publisher's App Store account. Where it differs is in the distribution of the game, where it will help secure the title chart-boosting attention outside of the remit of the tools provided by the App Store.

"There are all sorts of crazy tactics involved in increasing visibility, and they change every three months, and developers have to work with so many different advertisers – which also have models that change frequently too," Seyler says. "Economies of scale matter so much when you work with those kinds of guys, and there are so many other things to consider."

The Android space, for example, is one Seyler describes as very 'Wild West' in the way it allows devs to merchandise their games without them having to rely the rankings of the Android Market. Then there are the numerous distribution services for different global regions, including networks like Papaya, and the carriers and OEMs with which direct deals can be negotiated for featured spots.

"There's a lot you can do, and its getting harder to bottle a successful approach, even just for iOS, down into something simple, especially when things move so fast. It's so tough," admits Syeler. "From what I've seen with the developers I'm working with, it's just too much for them individually to make great games successful on their own budget, build cool IPs, manage their customer bases and then have to figure out the latest and greatest tactics to get noticed."

Kerosene also hopes to serve as a counter to what Seyler describes as 'consolidation' in the mobile space; that being the process prevalent in the App Store – and further afield in Facebook – whereby giant organisations like Zynga dominate such large networks of users, the playing field is anything but level.

> ***"We may have seen the last of the games that can succeed on the effort of one guy with no publisher and no infrastructure."***
>
> Brett Seyler, Kerosene

"Zynga can move existing users around so much less expensively to feed their new games," explains the Kerosene boss of the process of consolidation in the social networking space. "They can easily acquire a new critical threshold userbase for those games that means it is really hard to compete. It's not impossible, but it became very difficult in that space."

Seyler even subscribes to the school of thought that moves like Zynga's acquisition of *Words With Friends* developer Newtoy for a reported $53.3 million in November 2010 are possibly primarily about the procurement of users to move between other games held by the purchasing company.

And he sees that the same process is starting to spread in the mobile space, where he predicts either a dominating rise by ambitious publisher-independent studios like Backflip or Halfbrick, or by the few existing publishers in the space.

He does, however, recognise that the space may grow at such a rate it will be hard for any entity to consolidate the space completely.

"Even so, I think we may have seen the last of the games that, like *Tiny Wings*, can succeed on the effort of one guy with no publisher and no infrastructure or userbase management to lean on. If and when he makes another game he'll be starting from zero and hoping that the App Store treats him well again, but I think that will become rarer and rarer."

In that context, Kerosene offers a more attractive ecosystem, in that it presents independent spirits like *Tiny Wings* room to get noticed without having to make huge investments or have to sign away IP or equity to a traditional publishing giant.

With Seyler at the helm, Kerosene has every chance of becoming a success.

And if you were in any doubt that the departure from Unity wasn't amicable, consider this; the first Kerosene published game is one of the games currently cited as an key example of what Unity is capable of as an engine. Announced at Unite 2011, Luma Arcade's *Bladeslinger* will be arriving soon, fuelled by Kerosene.

www.kerosenegames.com

QUALITY, NOT QUANTITY

Kerosene boss Brett Seyler describes the like likes of Zynga, TinyCo and Pocket Gems as 'true pioneers' of user acquisition, but he isn't afraid to criticise the giants of social, mobile and browser gaming, and believes there is much to be learned from what he sees as a significant shortcoming.

"My criticism of those kinds of places is that they are creating the kind of content that is designed to optimise for local maxima," he says. "In other words, I don't think that they are creating content that can form any surviving bond or memory with gamers."

Seyler makes it clear that he doesn't have a problem with what he calls casual content, and says that succeeding with vast, mainstream audiences can absolutely be a good thing. But what is missing today from his vision of what the mobile space can offer is the equivalent of Pixar movies; entertainment giants that strike a chord with the masses and boast the quality needed to continue to charm in years to come.

In a world of design by compulsion loop and click-addiction game mechanics, Seyler hopes Kerosene will – by focusing on originality and less casualised product – put quality gaming at the forefront of the mobile space.

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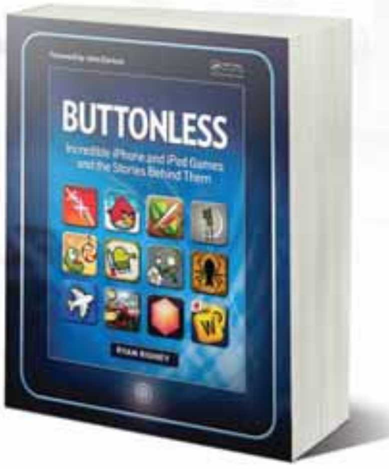
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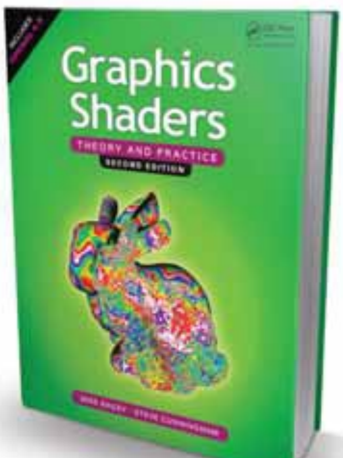

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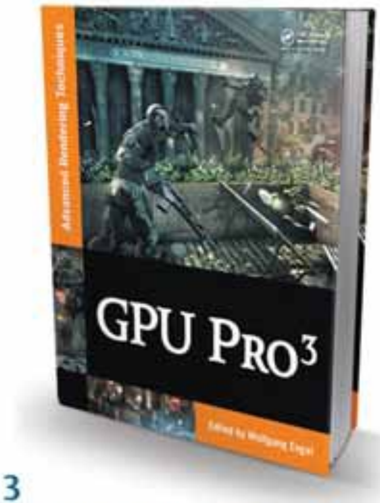

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Inside Outsourcing

Sending work to external studios has become a prominent practice in the games industry. **Craig Chapple** talks to those in the business about why this is, and considers the delicate issue of shifting asset creation off-site

HANDING ELEMENTS of development to another company has been a controversial subject in the past. Taking away work from a studio's talent and also out of the local area, off to perhaps cheaper devs to get the job done quickly, was almost unthinkable for many.

Fast-forward to 2012, and outsourcing parts of development is common practice. With triple-A games now requiring as many staff as a blockbuster movie, using another firm's services can be a necessity for finishing a title on time and on budget.

Games that have famously used outsourcing, albeit with varying degrees of success, include Square Enix's *Deus Ex: Human Revolution*, which used G.R.I.P. to develop the game's notorious boss fights, whilst Deep Silver hired Scottish animation outfit Axis Animation to create the infamous *Dead Island* trailer. Work on such high profile titles shows that the sector has come a long way during the last decade.

> ***"The process is now widely regarded as having more benefits than drawbacks, assuming you partner with the right company."***
>
> Dave Cullinane, RealtimeUK

"On the creative side, five years ago outsourcing was still regarded as a threat and viewed with suspicion by some developers. But now I think it's much more widely regarded as having more benefits than drawbacks, assuming you partner with the right company," says Dave Cullinane of animation and cinematics provider RealtimeUK.

"As such, I think it has become regarded as a mainstay of art production and is likely to grow in line with the amount of content that the new generations of consoles will demand."

AN EXTERNAL SOLUTION

The practice is now believed by many to be a prominent, and in some cases, key part of the development process, and has moved on from the days when outsourced talent was harder to come by and less fully realised.

"When we first started using outsourced talent as the main part of our development team it was an unusual thing to do," says Carl Dalton, founder of independent software developer and motorsport specialist firm Brain in a Jar.

"Now it is a normal part of the development process at one level or another for most studios, so I would have to say it has become very prominent."

Realtime UK was hired to create a series of 3D renders to help promote Codemasters' FPS title Operation Flashpoint: Red River

Tony Buckley, senior producer of Liverpool-based Catalyst, which works on all areas of production, says that using external workers has become more popular over the last five years, mainly due to the increased production costs associated with current generation console games.

"The need to provide higher resolution assets for their shiny new games meant that developers had to find alternative solutions to fulfil their art requirements; or face the prospect of significantly increasing their internal art team or succumb to a longer production schedule, neither of which are desirable," he explains.

Buckley adds that time has also enabled outsourcing companies to grow, with many now featuring strong back catalogues that demonstrate their successful track records. This allows developers and publishers to make an informed decision on what an external service provider can bring to the table, alleviating the old problems of the unknown.

As well as saving time and money, specialist outsourcers can also offer expertise in particular fields that a developer may lack, whilst also bringing in an outside view of a project and its direction.

Atomhawk's managing director Cumron Ashtiani says that hiring a single specialist to help with a particular part of development can be a tricky task for a studio, with long-term prospects not in the offing for the developer. As an outsourcer, he says it is able to keep full time employees and attach them to short-term projects.

Top to bottom: Brain in a Jar founder Carl Dalton, Spov's executive produer Dan Higgot, account director for RealtimeUK Dave Cullinane, OMUK CEO Mark Estdale, Atomhawk's managing director Cumron Ashtiani and senior producer at Catalyst, Tony Buckley

Right: Activision's racing title Blur saw Catalyst deliver 3D art assets and animation sequences for the game

"It is not always easy to hire an expert in to help at a critical part of a project, let alone on contract, as regardless of the salary, people want to put down roots," explains Ashtiani.

"By using a specialist in the field, developers get an instant solution and the benefit of someone who has worked on many different platforms and project styles. The staff who would have been contractors are employed by the service company and have a full time job so they also get a better deal and greater stability."

FARMING OUT

Despite the benefits, outsourcing remains a controversial practice. Whilst many believe that moving specific parts of development to an external source can be beneficial to a game's quality and help local development hubs grow and flourish, some suggest that off-shore outsourcing for simple cost effectiveness is damaging for the industry.

"I hate it," says Mark Estdale, CEO of voice recording experts OMUK. "I grew up in the North with the misery of what happened with coal and steel and this looks no different."

"I think it is a dangerous trend that could decimate development in the UK. Studios are closing because of it. It may make short-term pragmatic financial sense as we have to be competitive on a global stage but it is UK jobs, talent and the future that are being sacrificed."

Dalton agrees that outsourcing overseas can be very bad for some sectors of the industry, particularly the UK. He says that five years ago, whilst freelancers working in 3D modeling were hard to come by, outsourcing companies were easy to find. These days however, he says things have taken a turn for the worse in the UK.

"Today there are many more individual freelancers available, but UK-based outsource companies have all but died away in line with the increase in Eastern European, Indian and Chinese providers," he says.

A MODERN WORLD

Dalton admits however that the primary purpose for outsourcing any area of a project should be to find and fit talent with the knowledge and ability to complete a job and to do it up to standard. Whilst developers and publishers looking off-shore for purely cost saving measures are "outsourcing for the wrong reasons", he believes that a rise in quality and communications can make it a viable option.

> **“*I think off-shoring is a dangerous trend that could decimate development in the UK. Studios are closing because of it.*”**
>
> Mark Estdale, OMUK

"Instant communication methods and very fast, high bandwidth data transfer means that off-shore outsourcing has fewer disadvantages than it did a few years ago," explains Dalton.

"Many of the companies that have grown up in 'low cost' regions approach their work with exactly the same enthusiasm and dedication as any team in an 'established' region, they are game developers after all and we all love what we do."

Catalyst's Buckley says that his company assesses which of its partners are best for a particular job, and not on where they are based, stating that the view of off-shore companies providing low quality services no longer resonates in such a global industry.

"The perception that off-shore outsourcing results in low quality assets is definitely an out-dated perception. There are good and bad levels of quality with any service; that is why Catalyst only use tier one recommended partners wherever they may be based," he explains.

Dan Higgot, executive producer of London based design and animation studio Spov, backs up Buckley's opinions, believing that as long as a studio delivers results, then where the company is situated does not come in to it, nor how much they cost if they can meet requirements and produce quality.

"For a client, it doesn't matter where you are based, as long as you can deliver the results needed," asserts Higgott.

"We are an off-shore supplier for our US-based clients. For them, our offer is not price lead, but based on quality and innovation. We don't try to be the cheapest, because if we did we couldn't do the type of work and offer the level of service we do. It is a well-used cliché, but nonetheless true that it is important to remember the difference between price and value."

With such a disparity in opinion still rife in over the ethics of outsourcing off-shore, the sector is perhaps at times tarnished as a whole for any bad results that come form an external company's work, with the positives of what service providers bring sometimes ignored.

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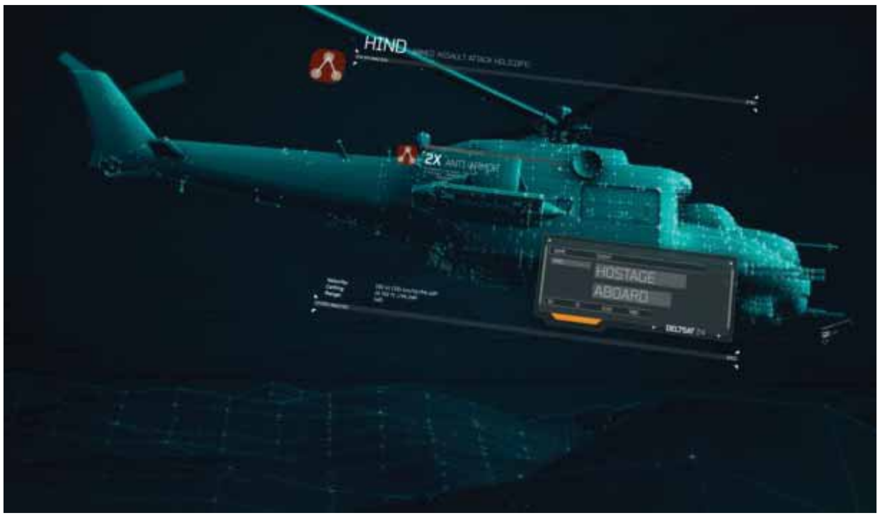

UK-based company Catalyst was the creative outfit behind Bizarre Creation's Bloodstone (above), sourcing and managing the creation of concept art, storyboards and in-game art assets, whilst Spov created all the cinematic cut-scenes for Infinity Ward's blockbuster Modern Warfare 3 (right)

SOURCE OF THE PROBLEM

Some of the blame for any poor quality results over the years could lay at the developer's own doorstep as well. The communication pipelines between developer and outsourcer are critical to a successful partnership, and studio's have in the past been guilty of lacking extensive guidelines and leaving the service provider to it.

Ashtiani says that occasionally Atomhawk will receive a brief from a developer made up of bullet points, and expects to "then magically get a finished image back that is exactly how they wanted it". He also says that getting enough feedback from a client can also be a difficult process, and this can potentially affect the quality of the product.

"The issue that most frequently causes problems for both parties is feedback time. For example a studio books us for four weeks but doesn't have the capacity to feedback on the work we are doing fast enough," he explains.

"So each time we submit there is a two to three day delay and over four weeks, that can easily push a project out by 20-to-25 per cent. This delay then means the client doesn't get the project finished when they wanted it, and we end up with staff 'on the bench' for 25 per cent of the time while we await the necessary feedback."

Estdale says that OMUK "frequently" faces the same problem for its voice recording services, but believes that whilst developers need to be more clear and descriptive on their goals, outsourcers also need to fill in any missing gaps.

"Enlightening developers as to what is needed to achieve the goal is a key part of the outsourcer's role," he states.

"You hire an expert to bring the full weight of their expertise. It is an executable outsourcer if they fail to educate the developer, and a dumb developer who doesn't listen."

Spov's Higgot agrees, and believes it is a two-way street, with both sides of the industry needing to work together to simplify and improve the process.

"It is the client's responsibility to issue a brief, the agency's job to interrogate and question the brief, and the process should continue from there. We should strive for openness, honesty and integrity in our working lives. It's nothing clever, but it makes the job easier for us all."

Despite the problems with communication and the remaining ethical concerns of off-shore outsourcing, the use of external service providers looks set to continue to grow as it becomes an integral part of the development process.

With the costs of making games set to rise as the industry moves to the next-generation, and as the competition on triple-A development heats up, the need for quality outsourcing partners has never been stronger.

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A new Wave

After Microsoft revealed it was working on a unique Sesame Street-based interactive TV show using Kinect, **Craig Chapple** talks with the console giant and sound studio Wave about the challenges of creating immersive audio

Sesame Street Kinect brings the loveable show to a new level of interactivity, giving players tasks such as throwing coconuts into an on-screen box

DURING THIS year's Consumer Electronics Show, which was also to be Microsoft's last at the event, the console giant announced that it was developing *Sesame Street Kinect*, a new interactive TV show based on the famous children's programme.

Using the Xbox 360's motion sensor peripheral Kinect, users interact based on cues given by the Muppets on screen, such as being asked to throw coconuts into a box. But being interactive, if the player refuses to comply with set directions, the show will produce new incentives and clips, perhaps introducing other Muppets to encourage the user or help out with the task at hand.

A MODERN ENTERTAINMENT

Creating such a new kind of entertainment certainly comes with its many challenges, and none perhaps more so than in audio.

With creating a sense of immersion the name of the game for such an ambitious project, the wrong sound cues could distance the user and create a barrier between them and the show, rather than one seamless experience.

To do this, Microsoft's Soho studio partnered with its close neighbour, audio outsourcer Wave Studios, which has worked on a plethora of games, films and adverts to date.

"We're dealing with sound design for various parts of the content in the show," says Wave's head of game audio Anthony Matchett.

"Predominantly it's interactive video segments that may path off and take different routes. We create the sound design, record foley and help with dialogue requirements."

Original footage for the Kinect show was shot at Sesame Street's New York studio live, with voicing recorded on set, rather than dubbed afterward. This left Wave the challenge of also having to successfully blend two clips that weren't originally shot together and making it a seamless experience.

"There's a unique challenge. As much as wanting to be creative on our own you have to take into account the Sesame Street heritage," says Matchett. "Equally, we are slightly extending upon that for that fact that its now interactive, which hasn't been really done before.

> **“*It's creating sounds that not only fit in with existing Sesame stuff, but also bringing a new element to this show.*”**
>
> Anthony Matchett, Wave

"So it's creating sounds that not only fit in with existing Sesame stuff, but also bringing a new element to this show. Things like reward sounds, when a player gets something right, just adds to the interactivity."

Microsoft's audio director John Silke adds: "The TV show would never have had to deal with videos being chopped and issues with flow at any point, because it's linear. So sometimes we have to take our own approach because it's new, I don't think anyone's really done it before."

THE SESAME SOUND

Wave has also had to build up the game's audio from scratch, as the Sesame Workshop does not have a complete bank of sound effects used throughout the show's history.

Matchett estimates that the company has had to create and blend hundreds of thousands individual sound effects to build up the game's audio, and it is a task that the creators of Sesame Street have also played an integral part in.

Not shy from collaborating on the audio elements of the project, Atkins says the creators have leant their experience of the Sesame world by offering useful feedback on the effects and what they need to sound like.

"They know what is and isn't Sesame, just off the bat," states Atkins. "Whilst they may not possibly have a sound archive of things going back 40 years, they do intrinsically and instinctively know what works and what doesn't work.

"Their feedback has been very good, they'll hear something and they'll give very specific notes stating 'on this show we do it this way'."

Should the Sesame Workshop, Microsoft and Wave succeed with *Sesame Street Kinect* in providing an immersive and interactive experience, Atkins believes that the London Soho area in particular can look to take advantage of this new genre, with companies like Wave already in place to build a new development hub upon.

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MIDDLE EAST'S LARGEST
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Land of opportunity

The Middle East is home to some 360 million people, and their appetite for games is on the rise. **Will Freeman** talks to the developers and trade bodies ready to harness the potential of what might be the industry's most significant new market

The inauguration of the increasingly important Dubai World Game Expo (above)

THE MIDDLE EAST is a misunderstood region. The national newspapers would have you believe it's a place defined by bloodshed, civil unrest, religious fervour and terrorism. Even the most liberal minded of those from outside the vast geographical area that stretches from Northern Africa to Western Asia can find it hard to shake from their minds the clichés that thousands of reels of television footage have etched into the conscience of the Western psyche.

It's certainly a place with its fair share of problems, but the reality for hundreds of millions of its residents isn't as alien as you might think.

Technology in many parts is just as prevalent as elsewhere, to the point that smartphone penetration in the United Arab Emirates alone has reached a staggering 200 per cent. Across the pan-Arab world 60 per cent of the population is under the age of 25, and subsequently the appetite for mass media culture is near insatiable.

Countries like Dubai are awash with investors, and in spite of the regimes that caused the Arab Spring, there are open-minded governments with a view to welcoming Western culture and industry.

And yet the games industry in the area is only just beginning to blossom.

UNITED THEY STAND

"In the area there is a huge interest in video games, and a huge market. For a long time there have been a lot of people in the region that love games and want to develop them," confirms Yannick Theler, general manager of Ubisoft's new Abu Dhabi studio.

Theler, a ten-year Ubisoft veteran who first joined the company at its Swiss studio, is undertaking the huge task of establishing and building an enormous development team in the largest city in the United Arab Emirates. And he isn't afraid to admit that – despite the opportunities available – building a games industry in the Middle East is going to take a monumental effort.

"Until now people here interested in making games only had two options. They could either leave the area and go to the US or Europe, or, more often now, they could try and set up with other people and try to make those games. The second option, though, left them lacking in expertise. It was very hard until now."

Fortunately for Theler and the other pioneers taking a bet on the Middle East's games industry, an ambitious media hub centred in Abu Dhabi City has been conceived with a view to establish the area, and wider region, as a globally relevant destination for games development, TV, film, animation, and numerous other industries.

180 millon potential
gamers in the Middle East...

TwoFour54's training academy (left). Middle Eastern games industry specialists Robert Fisser from Sony Computer Entertainment (top), Ubisoft's Yannick Theler (middle) and TwoFour54's Wayne Borg (bottom)

"For whatever reason historically there hasn't been the infrastructure here in the Middle East, but there's a huge effort to change that, which is something TwoFour54 is doing here in Abu Dhabi, but to serve the wider area," says Wayne Borg, COO of TwoFour54. "We want to build that hotspot that attracts young creatives, whatever field they are in, and is seen as a place to come where you'll find support, infrastructure, and a community of people that understand what you are doing. It's a place that's conducive to and supportive of producing great content."

GO WEST

For now the focus in building the region's industry to a globally relevant size focuses on creating culturally relevant content for the Middle Eastern audience, be it through culturally reappropriating triple-A IP from the rest of the world, or creating original IP and content targeted exclusively local tastes. This is something TwoFour54 is devoted to, and a specialty the likes of Abu Dhabi studio Jawaker excel at.

Jawaker, however, isn't afraid to admit more far reaching ambitions, and refuses to limit its horizons at the geographical and cultural boundaries of the Middle East.

"We focus on building card games for the Middle East and North Africa region, and currently have 13 of the most popular ones on our website, but our infrastructure is quite flexible and we could consider expanding globally in the future if we deem the option feasible," explains Ahmed Abdel-Yaman, operations manager at Jawaker.

> ***"In the area there is a huge interest in video games, and a huge market. A lot of people in the region want to make games."***
>
> Yannick Theler, Ubisoft

Out of context, a confident developer with far reaching plans isn't that uncommon. But the idea of a future where games built within a Middle Eastern cultural frame of reference permeate the global games industry could lead to a thrilling diversification in the themes and experiences Western players can access.

"The culture is quite different here, and that could mean that with the operation we have here we could see, in a few years, some very different new ideas and new perspectives on design that could reach the rest of the world," offers Ubisoft's Theler. "That is a very positive thing indeed."

"Many of the companies working here are looking at Arabic content, but there's an international viewpoint and international content is very much on the agenda," adds Borg, who believes that the more the area can internationalise the more it can take

NEW SCHOOL

After many years where games development focused training was near non-existent, the establishment of a new Gaming Academy by Abu Dhabi media hub TwoFour54 has filled studios in the region with a new-found optimism.

"The Gaming Academy is a collaboration between ourselves, Ubisoft and the SAE Institute, which is an industry focused learning institution with global reach and around 60 campus' worldwide," explains TwoFour54 COO Wayne Borg. "We acquired their Dubai campus last year, and there's 300 or so full time students there now."

It's still early days for the academy, but a 16-month full-time Level Design Course is already on offer to students, with a view to bolster the region's blossoming games industry infrastructure with a supply of capable talent.

one of the fastest growing gaming communities in the world...

Aside from some differences in clothing, the show floor at the Dunai World Game Expo will look utterly familiar to Western developers, proving that Middle Eastern games development isn't as alien as some might feel

advantage of being connected with the knowledge and skills of the rest of the world.

"We'd love to encourage the spread of this content globally," he continues. "For us the ultimate signature of success would be that content conceptualised and created here would be exported to the rest of the world. I don't think there's any reason that this region can't participate in a process that exists across much of the rest of the global games industry."

Of course, where there is so much opportunity there is also a great deal of challenge, and the companies across the region are happy to admit they have a long way to go.

"It is not easy to find the right staff, as the region lacks the educational programs in fields such as sound engineering, animation and game level design," says Mohamed Sanad, marketing executive at Egyptian studio Nezal. "We have to find some passionate people who are self-learned by reading some books, watching videos and so on."

TwoFour54's new Gaming Academy in Abu Dhabi City serves as part of the solution to the lack of suitably experienced local talent (*See 'Develop Like an Egyptian' panel, right*), and sets the United Arab Emirates metropolis apart as a leading destination in the region. However, many more similar games development savvy educational establishments will be needed to satisfy the wider area.

And then there's the no less important matter of generating revenue from the games, publishing and distribution models most suited to the Middle East's unique make-up.

> ***"From a global standpoint, start-ups can see some of the world's leading games companies investment here."***
>
> Wayne Borg, TwoFour54

"One of the biggest challenges we faced was monetisation," explains Jawaker's Abdel-Yaman. "Credit cards have low penetration rates and most people in the region don't trust using them online yet. Other solutions suffer from low regional availability, impracticality, or large fees, forcing developers to implement and maintain a large combination of solutions."

Furthermore, some say investment and understanding in the commercial worth of the games sector locally has a way to go.

According to Robert Fisser, Sony Computer Entertainment Europe's vice president of sales and commercial development for the European, Middle Eastern, African, and Australasian territories, the status of some elements of the industry – in investors' minds at least – need reprioritising in the Middle East.

"The region does not see the level of investment that could be justified," he says, going on to offer examples of areas that need to be recognised as warranting a greater emphasis when cash is divided. "Marketing budgets, events, and company headcounts come to mind."

REASONS TO BE CHEERFUL

Others, however, are upbeat about the changing attitudes of investors, and are confident that not only cash-rich UAE businessmen are stepping up to support games with funding.

"There's a lot of gaming start-ups here locally and we're even investing in some of those start-ups," insists Borg. "We've just invested in a couple such as Jawaker.

"For young start-ups here there is a lot of activity in the gaming space, and I think, certainly from a global investment standpoint, they can see some of the world's leading games companies making an investment and establishing a presence here, and that's a testament to the viability of the games industry in the region. I believe there's a lot of investment interest in the

and an audience hungry for quality games...

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opportunities here, both for investors locally and globally."

Furthermore, in the United Arab Emirates, developers almost without fail speak warmly of the support they receive from trade bodies. The authorities realise the potential the industry has to bring more money into the area, and provide a wealth of support for international companies looking to establish themselves in the region.

And unsurprisingly, it is again TwoFour54 that is setting the standard in supporting and facilitating investment from overseas.

"The Government of Abu Dubai, through TwoFour54, is looking to develop many different industries here, including an international media hub," asserts Theler.

> ***The other thing that helped us was the revolutions in the region, that made many people join Facebook and see what the tool is.***
>
> Mohamed Sanad, Nezal

"They are putting a lot of energy, expertise and effort into this. They are a huge help to companies thinking of coming here to make use of the potential here. They helped Ubisoft a lot with finding a location and sorting out visas. We are very well supported, and very well welcomed. There is so much enthusiasm from people here; from small companies and then people like Sony. There is excitement and people are motivated. It's been a very positive surprise."

And in an incredible twist, even the inspiring, often distressing events of the 2011 Arab Spring have helped games developers. While the global games industry pales in comparison to the significance of the events that toppled dictators throughout last year, there has still been a positive impact on the fortunes of the area's up-and-coming developers.

"I think Facebook's decision to add Arabic language boosted the social games market as the Arabic users are increasing steadily," says Nezal's Sanad, before delivering an insight that is quite remarkable. "The other thing that helped us was the revolutions in the region, that made many people join Facebook and see what the tool is that helped people in revolution."

Civil uprisings, it turns out, can also offer a way for consumers to discover new gaming platforms, and the Middle East is a place where that has already happened.

And with money, enthusiasm and a huge market fuelling the booming Middle Eastern sector, things look set to keep getting better.

While the UAE remains the region's development hotspot, other areas in the Middle East and North Africa house blossoming development hubs, such as Egypt, where studio Nelaz employs Mohamed Sanad (left)

DEVELOP LIKE AN EGYPTIAN

While Abu Dhabi is the undisputed king of Middle Eastern and North African games development hot spots, other hubs are springing up in the least obvious of places, and serve a growing audience.

Mohamed Sanad is marketing executive at Egyptian studio Nezal, and he has been telling *Develop* why the region has emerged as one of the world's most fascinating games development destinations currently active.

What makes the Middle East a great place to make games?
I believe that Middle East and North Africa market is a blue ocean, but it is largely underserved when it comes to original gaming content developed specifically for it, as almost all games are translated into Arabic from famous games in the US or EU. There are not many games that use the regions cultural elements that make the player feel at home. The market has shown great capacity and is growing steadily.

What are the challenges faced as a developer in the Middle East?
The main challenge is to find and attract the required talent. The other challenge we faced was the market data and statistics. There is very few, if any, information about the social gaming market in the Middle East.

What are the area's key strengths?
Basically, the lower salaries in Egypt compared to other places like the US or Europe make the development costs much lower.

Are their good quality educational establishments relevant to games development in Egypt?
Not at all. There is not a single place in Egypt to teach you game level design or sound engineering; you need to learn this by yourself or pay tons of money to join an institution in Europe or America, if you are interested in such field. It is also hard to find a good animation studio to teach you game animation. Most of our employees in these areas specifically are people who have passion and went a very long way to get the required knowledge by themselves.

What advice would you give to a young developer considering setting up a studio in the Middle East?
My advice would be to not copycat other global games and try to come up with ideas that fit the cultural elements of the region. Another piece of advice is to work hard to find the good talent that fit in with games development. You have to be a gamer. It will be easier if your employees are gamers.

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Power Up

As externally created engines become increasingly popular amongst developers and a necessity to indies, **Craig Chapple** looks at where the sector is today, and brings you an essential guide

OVER THE last ten years, the third-party games engine sector has flourished as specialist creators have emerged and studios have sought to cut costs and save time from the efforts involved in creating an internal solution.

The space has become ever more democratised, with a plethora of engines offering tools created for particular genres, platforms and studio sizes, whilst others try to offer middleware kitted out for quick and easy exports to multiple devices. Development speed and ease have begun to take central importance, as well as the need to combine quality visuals with cost effectiveness.

As Mike Walsh, CEO of AI plug-in specialist xaitment says: “Given today’s segmented games development market, I think you’ll continue to see two divergent game engine trends: some game engines will expand to address a larger set of needs, while others will focus on the needs of a specific genre.”

David Helgason, CEO of one of the leading engine tech firms Unity Technologies, reflects on the last ten years as “the decade of the game engine”, with studios increasingly licensing outside platforms, and says that the industry is moving to an “age of the unified solution”.

“The network effects of having a standardised baseline tool for the industry to use in training, prototyping, and production, are immense,” he explains.

Senior technical director Richard Hackett of Blitz adds that the current period is one of rapid change for the sector; with cross-platform compatibility, engines are beginning to take on the service model, rather than just simply licensing out the tool.

“We are increasingly looking at the platform as a service – technology becoming more service oriented,” explains Hackett.

“This enables games to engage more directly with the player to provide vital information on player behaviour and foster long term player relationships through services and post-release updates.”

INDIE RISING

The soar in independent development has meant that engine creators have had to change their own business models and the technology involved to create an affordable solution to an incredibly large userbase, some of whom may be only amateur developers.

Matt Daly, social media director at BigWorld, says this emergence has had a significant effect on the company’s direction, and that other vendors need to tap into the sector if they are to remain competitive.

“Any middleware developer would be remiss to not address the new needs of the rapidly-growing sector of small, often distributed, independent development teams,” states Daly.

“They’re developing compelling interactive experiences in comparably smaller budgets, with faster turnaround time, a higher rate of innovation, a lower rate of risk aversion, and they’re doing it on a myriad of platforms. So, I’d say we’re seeing an intense diversification of game types, as well as the tech that facilitates their development.”

With the smartphone and tablet markets growing at a rapid pace, and the industry readying itself for the dawn of the next generation of consoles, engine firms have their work cut out to keep up.

But whilst there are many challenges afoot, the third party engine space has never been healthier, as the plethora of solutions we profile here show.

UNITY

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The Unity engine has proved popular among developers, having been installed over 750,000 times, with thousands of released titles created through the platform.

The Unity Technologies built engine can be used to develop titles on numerous platforms, such as console, iOS and Android. It offers a feature list that includes full terrain generation, Nvidia’s PhysX physics Engine, C# scripting as well as an extensible shader system that supports rich lighting and full screen-post processing effects.

“By far one of the best features that we provide to developers is the ability to author a title once and then deploy it to any number of platforms,” says Unity CEO David Helgason.

“While there are certainly tweaks and optimisations that need to happen to work on different platforms, we make the process as easy as possible and provide the technology to deploy to as many platforms as needed.”

The base product is available to users free of charge for commercial use, and can be used to create and publish games on the PC, Mac and Unity Web Player. Helgason says this was done so that aspiring developers could get into games creation, without having to worry about high costs.

“When we introduced the free version of Unity, it was with the hope that it would give first time developers a real chance to make games and get them published without having to worry about percentage cuts, NDAs and wasteful negotiations,” he explains.

Customers can also purchase Unity Pro, which opens up several features such as audio filters, static batching, occlusion culling and deferred rendering.

UNREAL ENGINE

CREATOR: EPIC GAMES
PLATFORMS: PC, IOS, MAC, ANDROID, PS VITA, XBOX 360, PS3, WII
SEEN IN: INFINITY BLADE, MASS EFFECT, BIOSHOCK
WWW.UNREALENGINE.COM

The Unreal Engine is one of the best known and most used game engines in the industry. Now on version 3, it has been used in many top triple-A franchises such as *Mass Effect*, *Gears of War* and the *Infinity Blade* series on iOS.

The engine is integrated with more than 20 middleware technologies, and features visual scripting system Unreal Kismet and the Unreal Matinee cinematic system, as well as coming complete with the full Scaleform package, enabling developers to create flexible user interfaces using Flash.

Epic also provides a free version of the engine, the Unreal Development Kit, which can be downloaded and used for free, with a commercial license after royalties reach $50,000 in sales.

"Our focus is on providing the best possible tools for everyone, on every important platform, at any given point in time, period," says Epic Games vice president Mark Rein.

He also says that the company is gearing up for the next generation of consoles, as seen by its *Samaritan* demo at GDC last year, which gave a hint of the potential of UE4, which he hopes will ease any fears over the move to new platforms.

"Naturally, people are concerned about the console transition," says Rein. "Epic built *Samaritan* with UE3, to not only show what we want to see in the next generation of games, but also to show developers that they can license UE3 now if they want to ship a game for those systems on day one.

"As we get further into the next-gen cycle, more developers will migrate to Unreal Engine 4. We'll talk to each studio to see how we can best help them. We have great options for everyone."

Rein also reveals that it will be showing Unreal Engine 4 to "select developers" interested in the platform behind closed doors at GDC.

CRYENGINE

CREATOR: CRYTEK
PLATFORMS: PLATFORMS: PC, XBOX 360, PS3, NEXT-GEN CONSOLES
SEEN IN: CRYSIS, WARFACE, AION
WWW.CRYTEK.COM

Crytek's popular CryEngine 3 middleware is the powerhouse behind the company's hit triple-A franchise *Crysis*.

Also available as a free SDK, the tech features support in AI, physics, networking, audio and 'high-end' effects, and can be used for development on PC, Xbox 360 and PS3.

"With the combination of scalability and efficient development with the Crytek graphics and rendering, we believe this makes CryEngine 3 the maximum game development solution," says CryEngine director Carl Jones.

"With no pre-calculation or loading times though using the platform, there are now no delays to developers seeing their creations in-game – therefore there's faster overall project progress."

Jones believes that the engine space is currently in great shape due to a hugely competitive market and high demand from developers for Crytek's own platform, which has recorded almost half a million installs of the free SDK to date.

He adds that the sector will continue to grow, as engines need to provide ever-increasing power for users as games come closer to the quality of CG movies, whilst also keeping apace with the demand for faster tools and pipelines.

As well as providing a high performance tech for the current generation of consoles, with indies also taking advantage of the engine for downloadable content, Jones confirms that Crytek's platform is also currently being used for next-gen development.

"We've been planning for next-gen development since we started CryEngine 3," he says. "We don't need to rebuild our engine to deal with higher spec gaming devices, which will come on line in the next few years.

"In fact, developers are already using CryEngine 3 for games with target platforms significantly higher in power than the current-gen consoles. We'll be showing more on this during 2012."

HAVOK VISION ENGINE

CREATOR: HAVOK
PLATFORMS: WINDOWS, XBOX 360, PS3, WII, PS VITA, IOS, ANDROID
SEEN IN: STRONGHOLD 3, ORCS MUST DIE!, THE SETTLERS 7: PATHS TO A KINGDOM
WWW.HAVOK.COM

Formerly known as the Trinigy Vision Engine, Havok acquired the platform in August 2011, integrating its own software into the tech.

The tool provides a 'versatile' multi-platform runtime technology that its creators say is capable of rendering complex scenes at smooth frame rates, whilst having a set of integrated features such as streaming, scripting, audio and physics solutions.

Product management head Andrew Bowell says that both runtime and tools have "clean, well-structured" plugin API's, which he explains allows for features and modules to be easily added without having to change the engine's source code.

"With regard to optimisation, developers still do not want to relinquish control of the hardware to the engine. With that requirement they are looking for flexible, modular and open game engines coded in C++ they can easily customise where needed, but also rely on already provided highly optimised code. In terms of tools and workflow, it's clear that rapid iteration, fast build times and on-target editing are also key requirements."

The tech firm supports both big budget titles and small development teams through its Havok Strike Program, and Bowell believes that supporting everyone in the development community is a key part of the company's success.

"We have seen some really great games being developed by independent developers and small studios over the past couple of years," he says.

"With the evolving needs of the games development community, we are always looking for ways to help developers push the game-play experience to its limits.

"Last year, Havok developed the Strike Program as a way to offer small studios innovative licensing options, enabling them more freedom to execute their creative visions, regardless of their budgets."

BLITZTECH

CREATOR: BLITZ GAMES STUDIOS
PLATFORMS: PC, MAC, PS3, XBOX 360, WII, 3DS, PSVITA, BROWSER, IOS, ANDROID
SEEN IN: DEAD TO RIGHTS: RETRIBUTION, HOUSE OF THE DEAD: OVERKILL, WRECKED
WWW.BLITZGAMESSTUDIOS.COM

BlitzTech is a cross-platform game development tool that has been utilised by indies and large studios alike.

The tech covers pipelines from an integrated asset management database through visual editor with real-time editing to automatic dependency tracking and deployment into the game.

The engine supports 'high quality graphics', as well as real-time lighting, shadows and effects, Blitz's own physics, audio, AI, scripting and network services.

Blitz technical director Richard Hackett believes that supporting a plethora of platforms and tuning the technology to fit various development team sizes is the biggest challenge facing the sector right now.

"We are seeing much more variation in the scale of games from traditional console triple-A through to XBLA, browser and mobile," he explains.

"This brings challenges for both technology and business models to ensure that what we offer is appropriate for both sectors.

He adds: "It isn't just about bringing console quality to multiple devices and ensuring that the performance and power management is there; it is at least equally important that the development tools we provide support both the high-end quality on one side and also rapid development cycles on the other."

Hackett says that as well as the range of platforms and features the engine current supports, Blitz is continually looking to position itself for the future and has has just added support for Native Client, a Google Chrome technology for securely running C++ code in the browser, as well as positioning itself to support next-generation development, which he hopes to announce later this year.

"We are also looking at future platforms such as console quality gaming for HTML5 capable browsers, and have some promising proof of concept technology for targeting HTML5 with full hardware accelerated 3D," he says.

INFERNAL

CREATOR: TERMINAL REALITY
PLATFORMS: PC, XBOX 360, PS3, PS VITA, 3DS, IOS, WII
SEEN IN: STAR WARS: KINECT, GHOSTBUSTERS: THE VIDEO GAME
WWW.INFERNALENGINE.COM

Offering what it states is a platform ideal for triple-A development, Terminal Reality's Infernal Engine allows users to create high performance games for a multitude of devices from console to mobile.

Used in the company's own games such as *Ghostbusters: The Video Game* and *Kinect Star Wars*, lead technical artist Ryan Monday says the tool offers a single WYSIWYG editor that "allows users to deploy to all consoles and mobile platforms and allows them to maximise on their development budget by focusing on game-related functionality".

It also features the Velocity Physics engine that allows users to create destructible environments, with a collision system its creators claim maintains thousands of simulating objects and offers real human body physics.

Despite being known for its integration into medium to large studio titles, Monday says Infernal has shifted its focus to providing affordable solutions as the sector moves away from simply pushing hardware boundaries.

"For the past decade the engine space has been focused on pushing the latest hardware to its limits," he says. "With the recent indie boom we have shifted our focus to tools, allowing smaller studios the ability to put out triple-A quality products on a low budget."

Monday also says that when the platform was designed, Infernal wanted to make sure that it would be future proof, with the intensive systems in the engine possessing the ability to be multi-threaded.

"This gives us a huge advantage as new hardware starts to hit the market. We will fully support the next-gen consoles, continuing to keep Infernal on the most platforms of any solution on the market," he says.

GAMEBRYO

CREATOR: GAMEBASE
PLATFORMS: PLATFORMS: PS3, XBOX 360, WII
GAMES: EL SHADDAI, EPIC MICKEY, LEGO UNIVERSE, CATHERINE
WWW.GAMEBRYO.COM

Gamebryo is a multiplatform engine which Gamebase say has been designed to offer a simple development method.

Working on a license per title basis, Gamebase technical director Gabriel Liberty says the platform can be used by medium to large studios and aspiring indie devs alike.

"The focus of Gamebryo is to facilitate game development," says Liberty.

"To achieve this, we simplified the workflow so that even the most novice games developers can produce high quality games. Simplicity alone is not enough and you have to have the muscle to drive current demand for amazing graphics running at amazing frame rates."

Liberty believes that the engine space has gone through a "significant pass", and that one of the sector's central philosophies is speed, both in creation of the platform and in its ability to quicken the development process. He says that Gamebryo overcomes this barrier by offering incremental updates to its technology as the industry advances, keeping its users up to date with the latest tools.

"Gamebryo now has the ability to resemble game studios internal technology by being able to deliver technology incrementally to customers who wish to stay on the cutting edge," explains Liberty.

"This provides our development team strategic insight on how the technology is being used by customers and what adjustments need to be made. No longer do we have a cycle where we ship technology to only find out that it is not aligned with customer needs. We can save time and resources by providing our customers easy access to the latest and greatest."

Liberty adds that customers who adopt early pieces of new tech can help define it, which he claims is a collaboration that "has never been attempted before in the game engines field", with the company having gone through "major changes to make this possible".

SOME VICTORIES CANNOT BE ACHIEVED...
WITHOUT THE PROPER ENGINE.

COMBAT
WINGS
THE GREAT BATTLES
OF WORLD WAR II

havok™ VISION ENGINE

Havok™ Vision Engine armed City Interactive with the power and stability of a complete, out of the box game engine for Combat Wings: The Great Battles of World War II. By providing a clean and object-oriented C++ API, the technology includes a variety of features that helped City Interactive break through technical barriers, opening up a wide range of possibilities for the iconic planes and missions of World War II.

Learn more about Havok products and career opportunities at GDC 2012.
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BIGWORLD

CREATOR: BIGWORLD TECHNOLOGY
PLATFORMS: BROWSER, PC, XBOX 360, PS3, IOS
GAMES: WORLD OF TANKS, COPERNICUS (UPCOMING), TIAN XIA II
WWW.BIGWORLDTECH.COM

BigWorld is a middleware platform that specialises in massively multiplayer and online games development, with core components of the product including server, client, plug-ins, supports and tools such as particle, model and world editors.

Built to help with the development of PC and browser games, as well as being available on iOS, Xbox 360 and PS3 via network API, the engine has been used to create games such as Wargaming.net's *World of Tanks* and Chinese MMO's *Tian Xia II* and *Kingdom Heroes 2 Online*.

BigWorld Server also offers a solution to enabling games to scale rapidly to support hundreds of thousands of players. Bigworld social media director Matt Daly says that with the rapid expansion of the games industry's collective target market, there are many more people playing games simultaneously.

"One of the biggest-font items on BigWorld's roadmap is interoperability between BigWorld Server and the new platforms that are going to make it increasingly possible to bring more users simultaneously into an experience, re-defining the concept of 'massive' in gaming," he says.

With so many developers now also creating games on their own or in small teams, the engine vendor last year released the Indie Edition of its platform to tap into the emerging market. Daly says this has received strong interest and adoption from the indie development community, with the company keen to support devs wherever the market is headed.

"BigWorld's roadmap tends to be composed partially of what current and future clients will need. Increasing focus is being put on mobile and browser," he states.

"Thankfully, BigWorld Server is quite extensible and can be piped in relatively easily into any front-end. This has allowed BigWorld to be fairly agile with its client development roadmap."

HEROENGINE

CREATOR: IDEA FABRIK
PLATFORMS: PC, MAC, LINUX, MOBILE
SEEN IN: STAR WARS: THE OLD REPUBLIC
WWW.HEROENGINE.COM

Idea Farbrik's HeroEngine is a development platform tailored especially for MMOs, and most famously used in BioWare's *Star Wars: The Old Republic*.

The middleware comes with a windows client, world server and integrated suite of tools. Idea Farbik COO Neil Harris says that the platform provides a "tightly integrated server system" to help produce stable environment crucial to an MMO world that needs to handle thousands of concurrent users.

Its creators also offer small developers a free-to-use HeroEngine license, the HeroCloud, that handles all hosting and bandwidth, taking 30 per cent of net revenues once games start taking advantage of the services and make money.

Harris says that the engine is currently being used on an unnanounced Zenimax Online title, and also claims that since revealing HeroCloud in 2010, 5,000 games have been made with HeroEngine.

With the games engine market continuing to become more fragmented and specialised, Harris says one of the key challenges facing the vendor and the entire sector is in providing a single optimal solution for projects.

"There are many different kinds of games – an engine that optimises rendering is usually not very good at an MMO because of the different kinds of needs of an MMO game," he explains.

"Social games make use of Flash, which is widely available, but at a much lower end of graphics performance. Engineering involves trade-offs to optimise performance for specific projects."

Harris says that Idea Fabrik is currently working on a revised rendering engine for its client, whilst on the business side it is integrating billing, marketing and analytics platforms. He also said the company will begin to roll out Hero clients on other devices such as Mac and smartphones to customers in the next year.

SHIVA

CREATOR: STONETRIP
PLATFORMS: BROWSER, PC, MAC, LINUX, IOS, ANDROID, BLACKBERRY, WII, XBOX 360, PS3
SEEN IN: EARTH AND LEGEND, THE NECRONOMICON HORROR, SUPERSONIC
WWW.STONETRIP.COM

ShiVa is a 3D real-time cross-platform engine that comes complete with a sound library, 'advanced' shading systems, physics engine and HUD rendering, whilst it is also extendable with plug-ins like PhysX, Fmod and ARtoolkit.

Targeted at both indie developers and mid-sized studios, ShiVa comes in basic and advanced editions, with the latter featuring a more robust set of development tools for its users such as asset management, optimisation software and performance profiling.

Stronetrip's VP of communications Fabien Le Vavasseur claims that it was one of the first engine firms to adopt the royalty-free model back in 2007, following in the footsteps of Flash. He says that the software's pricing is now calculated to target specific budgets, depending on the developer's size and project.

He adds that the company is constantly looking to keep up with where the industry is heading, to make sure its ShiVa engine remains relevant to devs.

"We are constantly working on the engine to provide better performance and quality; this has always been Stonetrip's goal and it's what drives us," says Le Vavasseur.

"We also work hard to stay up to date with all the biggest gaming platforms, such as the PS3 and Xbox 360. We continue to strive and succeed to secure the best performance from each."

Not content with what they currently offer developers, the technology outfit is also moving toward further improvements and potentially extended platform support for next-generation systems such as the Wii U, although that company has yet to decide on what devices it will be backing.

"While a decision hasn't been made, our long time experience with Wii U would lead me to believe that it will be updated," says Le Vavasseur.

"We have just released the new BlackBerry PlayBook/QNX support and there is more new console support coming soon. New support updates are always released free of charge."

MARAMALADE

CREATOR: IDEAWORKS 3D
PLATFORMS: IOS, ANDROID, SYMBIAN, BADA, BLACKBERRY, LG SMART TV
GAMES: PRO EVOLUTION SOCCER (IOS AND ANDROID), LARA CROFT AND THE GUARDIAN OF LIGHT (IOS AND ANDROID)
WWW.MADEWITHMARMALADE.COM

Smartphone and smart TV platform Marmalade abstracts the mobile OS at a low level, enabling cross-platform mobile game creation to look like vanilla C++ game development.

"Any pre-existing C/C++ code can be re-used with little or no changes – that includes open source or proprietary code modules, including physics engines like Box2D/Bullet, and database engines like sqlite – or large parts of pre-existing games engines or games," explains Ideaworks CTO Tim Closs.

Marmalade has been used for games such as Konami's *Pro Evolution Soccer* on IOS and Android, as well as Hotgen's runner-up Apple Game of the Year *To-Fu*. Games ported for wider development also include PopCap's *Plants Vs Zombies*, and Electron Arts' *Sim City Deluxe*.

Closs says that with modern developers needing to realise maximum performance of their apps whilst also targeting a wide variety of platforms, Marmalade was created to help alleviate these issues and provide a smooth solution.

"Our approach has always been to provide as open and flexible an environment as possible; hence the emphasis on standards such as C/C++ standard libraries and OpenGL ES," says Closs.

"Other engines focus on providing drag-and drop tools, but force the developer to lock themselves into an entirely proprietary environment. That's our differentiation, and one that many games developers understand and value."

As well as providing support for current mobile OS's and smart TV's such as iOS, Android and LG Smart TV, Closs says Ideaworks is currently working on support for other TV platforms and devices that the it believes will see success within the next year.

APP GAME KIT

CREATOR: THE GAME CREATORS
PLATFORMS: IOS, ANDROID, MAC, PC, BADA, BLACKBERRY
SEEN IN: SNAKE SNACKER, JUMPING JACK, CANNONBALL
WWW.APPGAMEKIT.COM

The Game Creators' App Game Kit was released as a 'Community Edition' through the company's website in August of last year.

The tool enables users to translate code written in AGK BASIC to multiple platforms such as iOS and Android, without the need for the programmer to re-write code to make their title compatible with different systems.

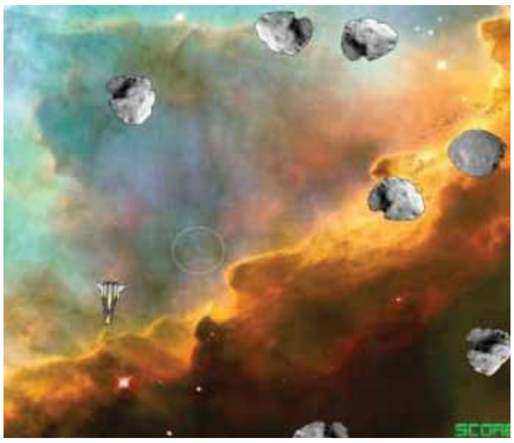
The Game Creators financial director Richard Vanner says that the app is targeted mainly towards hobbyists and indie developers, making simplicity in the development experience crucial. Despite this though, he says that provisions for more experienced developers have also been made, with the platform also compatible with C++ coding for those looking to get more from the engine.

As well as a simplified coding experience, Vanner says that says issues such as device resolution and coding languages are made easier to allow programmers to concentrate on game creation.

"AGK is designed to abstract issues such as player input system – mouse, touch, keyboard, buttons – and device resolution – form factor, aspect ratio, orientation – thus allowing the game developer to focus on their app creation instead of how it will work across each device," he explains.

"The upshot is a truly write once solution. By providing both a BASIC and C++ variant, programmers can choose the language they are most comfortable with, and our extensive documentation and active community ensure you have help when you need it."

Vanner adds that in future TGC will be incorporating "all the key features" devs might expect from a complete platform, whilst also making AGK compatible with Web Player, HTML5 and smart TVs.



GAMEMAKER

CREATOR: YOYO GAMES
PLATFORMS: PC, IOS, HTML5, OSX, ANDROID, SYMBIAN, PSP
GAMES: STEALTH BASTARD, CINDERS, SIMPLY SOLITAIRE
WWW.YOYOGAMES.COM

Through the 2D focused engine GameMaker, developers can create games for mobile, PC and HTML5, whilst its creator YoYo Games is also currently working on enabling support for Frontier Development's tiny computer Raspberry Pi.

Like many of its contemporaries, one of the engine's most important features is its ability to work with a single code base whilst also being able to target multiple devices. Yoyo Games claims that its in-development title, *GraveMaker*, takes just 20 seconds to export to various platforms.

The company's head of development Mike Dailly says the tool has been used to develop more than 127,000 games, which includes titles such as MoaCube's Cinders, Curve Studios' Stealth Bastard and the company's own Simply Solitaire.

Dailly also reveals that with the focus on creating a tool that suits a developer's budgetary constraints and time restrictions, YoYo Games is readying to release GameMaker Studio and version 9 to make the process of development and porting an even smoother experience, whilst also improving the power of the engine.

"We will soon be launching GameMaker: Studio to bring our one-button export to the public and the games industry, and everyone will be able to do exactly what we've been doing in the last year in terms of cheaper games creation and easy-as-it-gets exporting to multiple platforms," says Dailly.

"We're certain this will maximise returns for both professional studios and indie developers."

He adds that GameMaker 9 is a complete rewrite of the platform. The language will be modernised, whilst the IDE will undergo a resdisgn to "increase power and flexibility to the designer". He says that these changes will mean the latest version will "redefine" games creation for the casual games sector.

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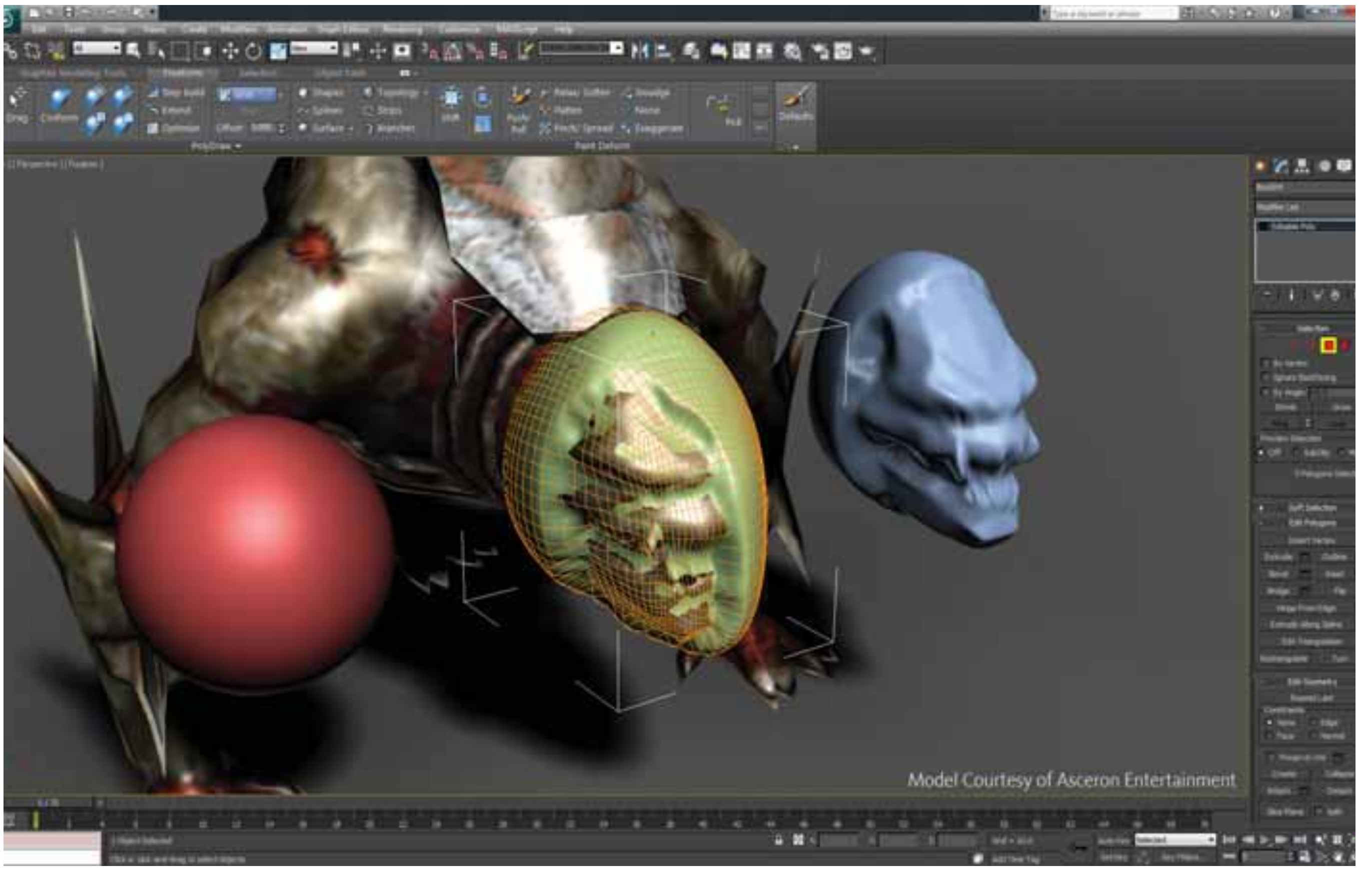
The future of Autodesk

GDC 2012 will see some big news from tools giant Autodesk. With the show upon us, **Will Freeman** asks the company's vice president of product management Marc Stevens, what we can expect, and how Autodesk sees the industry's future

Autodesk's Digital Entertainment Creation tools, such as 3ds Max (right) are beginning to cater for a wider variety of studio models, says Marc Stevens (above)



IT'S BEEN AROUND a year since you revealed the Project Skyline pipeline concept and debuted the 2012 iteration of the digital entertainment product line – a relatively long time in the games industry. How has Autodesk's perspective on the industry evolved over that time?
One thing we're really trying to do with games is better understand and communicate our vision for what Digital Entertainment Creation – or DEC – means for games.

Back then Project Skyline was a technology where we started to talk about a games market today where – not unlike film – things have been getting more complex and people are wanting to do more on the same budget. They want more interesting gameplay – and despite the rise of social gameplay they still want ever better graphics, whether that's on a console or some sort of MMO game.

Me personally, I think what you're going to see happen is that in the rise of these successful social gaming platforms where the differentiator is the social aspect of the game, as more show up and where there's more competition, people are going to want to stand out. That will be through, again, gameplay and graphics; the things that make console games successful.

Before that change, we used to see three tiers in the industry; the triple-A developer at the high-end, and then the mid-tier developer that was seen as doing 'double-A' games, and then the casual and lower-spec games. We're seeing the middle segment going away now, and publishers are spending a lot more on investing in key franchises.

There's less taking of chances, but there is more investment in that casual space down at the lower end. The middle tier are either climbing up to those triple-A games, or they are splitting into smaller newly made studios targeting the casual and mobile market.

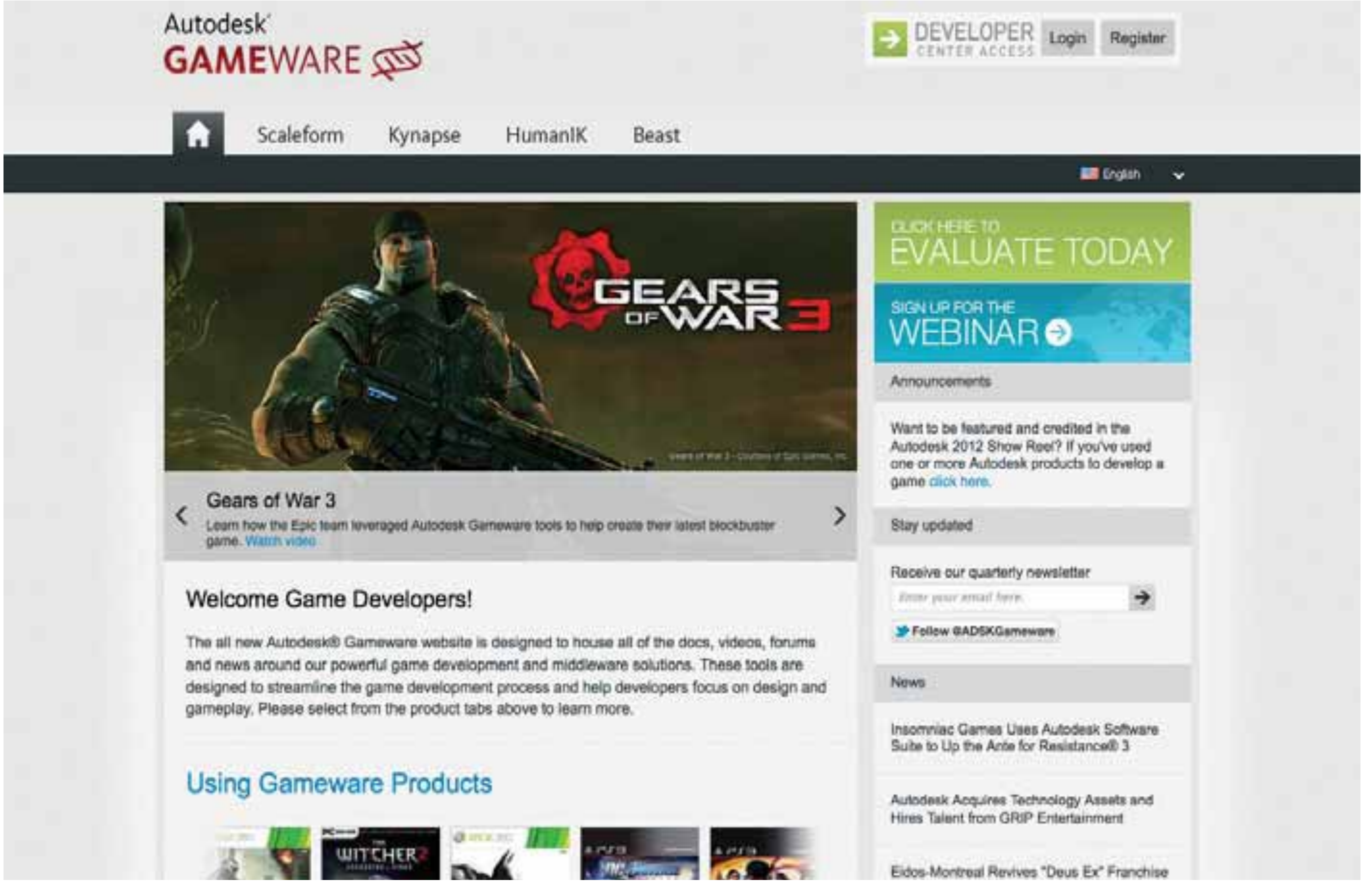
> ***"People are going to want to stand out in social, and that will be through, again, gameplay and graphics."***
>
> Marc Stevens, Autodesk

So how is that reflected by what Autodesk offers developers?
What's good about that change is that now, at the top, there is even more complexity and even larger teams, and that's where our tools can help. And with a lot of those middle-tier developers going both ways; they already knew our tools, and they are starting to take that knowledge and our tools down into those segments.

What we're looking at when we're talking about what DEC means for games is not dissimilar from the Skyline message. We're allowing a workflow where people can work more smoothly from their art creation all the way out to where they are putting out content on their runtime device. It's about creating an iterative workflow. With DEC we've been asking ourselves how can we help games developers with this workflow where they can continually create their art, see how it runs in game, and then change their art accordingly, without it being a super-heavy, complex process.

And you're talking about a process suitable for each tier of that spectrum?
I couldn't say Autodesk really invented this. The larger games developers have been doing this on their own. They don't have a choice but to solve these problems. Everyone in that space is trying to solve these problems in a similar way, and then down market there are developers who don't have the luxury of large teams to do this for them.

That means that there's a way Autodesk can help everybody. I feel 'democratised' is a bit of an overused term, but we can help standardise these workflows and help bring them to a wider group of people.



Gears of War 3

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Autodesk Acquires Technology Assets and Hires Talent from GRIP Entertainment

Eidos-Montreal Revives "Deus Ex" Franchise

Autodesk is looking to form a closer bond with the games development industry by bolstering its Gameware website

You mentioned the Project Skyline pipeline concept. Where is that today? Is it a finished product yet?
Most of this stuff is still under confidentiality with the specific companies we have been working with. We're even exploring what the workflows of the next-gen are. We're looking at the Wii U coming out, and while I can't confirm anything, everyone keeps hearing about other consoles potentially coming out. We're working with some developers – I want to call them charter customers, because it's not really a beta we're doing; it's a collaboration where we learn together as we go.

We have it, and a year ago we had it, and we've got it so people can play with it, and it's integrated with their pipelines. But we've really done it as a next-gen pipeline and not for current-gen pipelines, which is kind of done, where people are crunching on timelines and money and don't have the opportunity to change things.

Skyline is about what would make a better pipeline for next time, and we're engaging with a couple of our customers on it. They are helping us with what next-generation pipelines should be like, in terms of what we think they should offer, but also in terms of what they really need to be in practice.

It's part of the same approach to the way we do things when, for example, we picked up Scaleform.

So how does the acquisition of a UI company tie in with a vision like Skyline?
Interface – like workflow – for games development is only going to get more important as we move forward, and how we can build that out into a nice neat workflow is important. Skyline was actually about animation, but we are looking at how we can take not just animation but UI, or maybe building environments, or whatever it may be, and apply the same logic to it.

So we've been looking at all sorts of things like that – we made another acquisition of a company called Grip here in Montreal. They do higher-level behavioural technology. Grip have done the AI systems in some pretty successful triple-A titles.

We're kind of getting enough pieces there so that people will be able to apply these workflows to different disciplines across the gaming pipeline. But we'll also continue to stay open enough, because we know there are people that still have their own technology that they developed. We still live in a world where the majority of people use in-house custom technology, versus the ten or 15 per cent of the market that choose to buy off-the-shelf engines.

> ***"At GDC we'll have some news for the casual and mobile space, as that remains a great area of interest for the business."***
>
> Marc Stevens, Autodesk

Will we see Autodesk make or acquire an engine in the near future?
For us that's a tough place to be in, due to the fact that there are so many people that use so many solutions and there seems to be no 'one size fits all'. Making a commitment like that would exclude us from a large part of our customer base today.

What can Autodesk video games customers expect from you at GDC 2012?
Well, back at MIGS last year we launched our Gameware brand and website. What we wanted to do in creating that is build a direct channel to games developers to address the programmers more directly.

That kind of came from the fact that Scaleform had a great website where developers could go and get information, get technical support and all sorts of product information and trials.

What we've done is take all of our middleware products – things like Human IK and Beast, and the Grip products are going up there, and then there's Kynapse – and we've built them into this nice neat environment we've branded Gameware. It's going to continue to grow as our focus site to talk to the games development community.

As Skyline matures, and as we move our technologies from being middleware to being a whole workflow from which you can create your content out to the runtime, we're going to continue to grow that site and continue to grow the investment there.

There will be a wider launch and more from Gameware at GDC.

Also at GDC, well, you can take your best guess. We're going to have, or definitely would hope to have, some supporting new releases of the middleware products. I can't confirm that 100 per cent and tell you what products and what releases and everything, but we're going to show up with a strong line-up and a very clear message to the community that we're investing a lot here.

At GDC we'll also have some news for the casual and mobile space, and that remains a great area of interest for the business, both at GDC and throughout the year.
www.autodesk.com

Speech Graphics CTO Michael Berger (left) and CEO Dr Gregor Hofer (right)

Talking Heads

Speech Graphics is evolving its facial animation service into a tool you can license yourself. **Will Freeman** catches up with the company's senior staff to find out more

SCOTTISH TECHNOLOGY outfit Speech Graphics exists as a thriving service company specialising in audio-driven lip syncing.

A relative newcomer in the global games industry, it has already built quite a name for itself with a run of award nominations and wins, and now it has bold plans to repackage its eponymous technology as a tool.

"We feel a software company is more scalable and ultimately it's where we want to go," confirms Speech Graphics CEO Dr Gregor Hofer. "By offering a tool we can reach more customers with our solution. As to what developers prefer, some say they are happy to outsource to animation services while others prefer the control offered by a tool that can be integrated directly into their production pipeline. We feel there is a place for both models.

"Starting with the service model simply allows us to use interactions with game developers to inform our development program, to ultimately produce a technology that will provide exactly what they want."

Speech Graphics may not be the first service provider to move on the middleware space, but to hear such a clear-cut plan certainly isn't typical so early in the life of a games technology company, regardless of discipline or specialty.

And just because the team's long term plan emphasises fleshing out a tool, it doesn't mean that Hofer and his colleagues are holding back with their dedication to developing and offering a fully featured service.

FACE FACTS

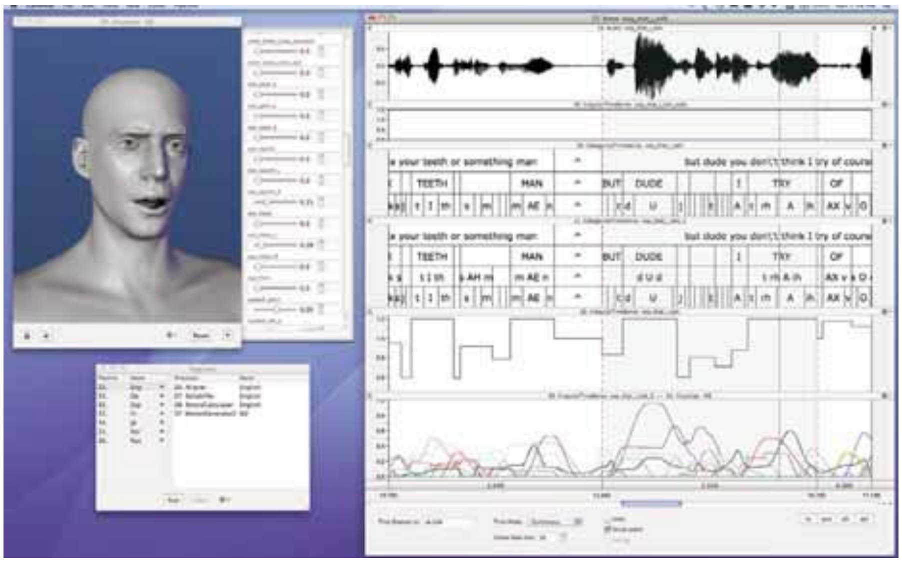
The company's solution is centred around a model that sees clients provide audio and facial models, which Speech Graphics work on with in-house software tools to produce synchronised animation.

"We use ten, proprietary high-level animation channels to drive bones or blendshapes in the same manner," explains Hofer. "These channels are based on our analysis of the way the human face moves during speech. Output is provided for any of the popular 3D animation packages. The solution works equally well in any language, which means our service is also ideal for re-animating faces in different languages for localisation. Our animation solution has already been integrated and proven in production pipelines at major game development and motion capture studios."

According to Speech Graphics' senior members, the tech behind the service betters equivalent audio-driven facial animation systems by pooling speech recognition and graphics experience. In doing so it builds a solution based on muscle dynamics that predicts how human facial muscles move to produce speech sounds. It's a highly specialised approach, and one its creators insist betters the established model.

"Previous audio-driven solutions rely on very simple lip-sync algorithms, and quality has not changed much since the 1990s," claims Speech Graphics' CTO Michael Berger. "With current polygon counts and character realism this lack of improvement is increasingly out of place. Speech is one of the most difficult things to animate convincingly, due to that amazing combination of fluidity and accuracy in natural speech."

For now, that difficulty and Speech Graphics' technology's subsequent intricacy means that currently triple-A studios remain the service's



In developing the Speech Graphics service into a tool, GUI design has been of upmost importance

most relevant customers. Those bigger studios have a greater hunger – and perhaps need – for visual polish. And in particular it is the triple-A games that, like *Skyrim* and *Star Wars: The Old Republic*, shower the player with spoken dialogue that Hofer sees as best suited to the company's ability.

"However, mobile and browser-based games are fast improving in graphic quality," offers Hofer. "Our solution will be ideal for that market as well, especially when we release a software product that can be used by a large number of developers.

"In addition to game developers, we also work with other animation companies that service the games industry."

Speech Graphics is also forming partnerships with motion capture studios with a view to offer joint services based on its relevant technologies.

THE SOUND OF POTENTIAL

In working its service into a tool, and through collaboration with companies in related specialties, Speech Graphics is to bring facial animation to lower-budget games; a fact that will chime with those who have long predicted the emergence of triple-A on mobile and browser.

And as the convergence between mobile, social, and console games increases, Speech Graphics is striving to keep pace with the technological frontier so as to make sure its services and technology match current needs. Hofer highlights the on-going content delivery required for online games as an example of an area closely watched by he and his colleagues, and something the team can plug into by automatically generating animation for incoming speech content.

"We are also following trends in facial modelling, as we believe even the most accurate dynamics are lost on poorly rigged facial models," says Berger. "Part of our expertise lies in knowing how the face naturally deforms during speech, so we feel we can have a major impact on the industry by guiding development of facial models that are well-suited to speech.

> ***"We feel we can have a major impact on the industry by guiding development of facial models that are well-suited to speech."***
>
> Michael Berger, Speech Graphics

Despite all the enthusiasm and optimism on Speech Graphics' behalf, challenges remain in turning a service into a tool, even for a company so confident in its product.

As Speech Graphic's current in-house tech is standalone software, managing import and export vis-à-vis the major animation packages in order to interface with clients, has proved a trial that has taken a huge effort on the company's behalf.

"A bigger obstacle was dealing with client facial models that are not suited to speech, which required a good deal of effort until we arrived at an ideal method for facial model adaptation," admits Berger. "This problem must also be handled in a user-friendly way for any software tool we subsequently release, whether standalone or plug-in. In addition, in GUI design for these tools we need to visualise important information about the speech signal that can be used to optimise output."

Looking forward, there are other challenges, but most are not Speech Graphic's sole responsibility. Together, a collective pan-industry effort is underway to address the fact that, according to Hofer, facial animation remains some way behind other aspects of games technology.

"This is partly because of the complexity of faces, but also because of how we perceive them," Hofer suggests. "As humans we innately scrutinise faces and respond on a very deep level to facial expressions. A title like *L.A. Noire* shows that you can make a successful game where some of the main game elements centre around our innate ability to read faces."

"However, the push for greater realism in faces – combined with a continued rise in face-centred spoken dialogue – makes it crucial for developers to acquire new technologies for facial modelling and animation pipelines," adds Berger. "We believe there will be continued convergence between facial modelling, procedural facial animation and the use of data-driven techniques such as 3D or 4D scanning."

It's an enchanting vision of the future, and one that Speech Graphics is doing everything it can to be a part of, be it as a tool or as a service to artists and animators.

www.speech-graphics.com

SOUND LOGIC

With a multitude of animation services jostling for the attention of developers of every size, why would a studio choose Speech Graphics' audio solution?

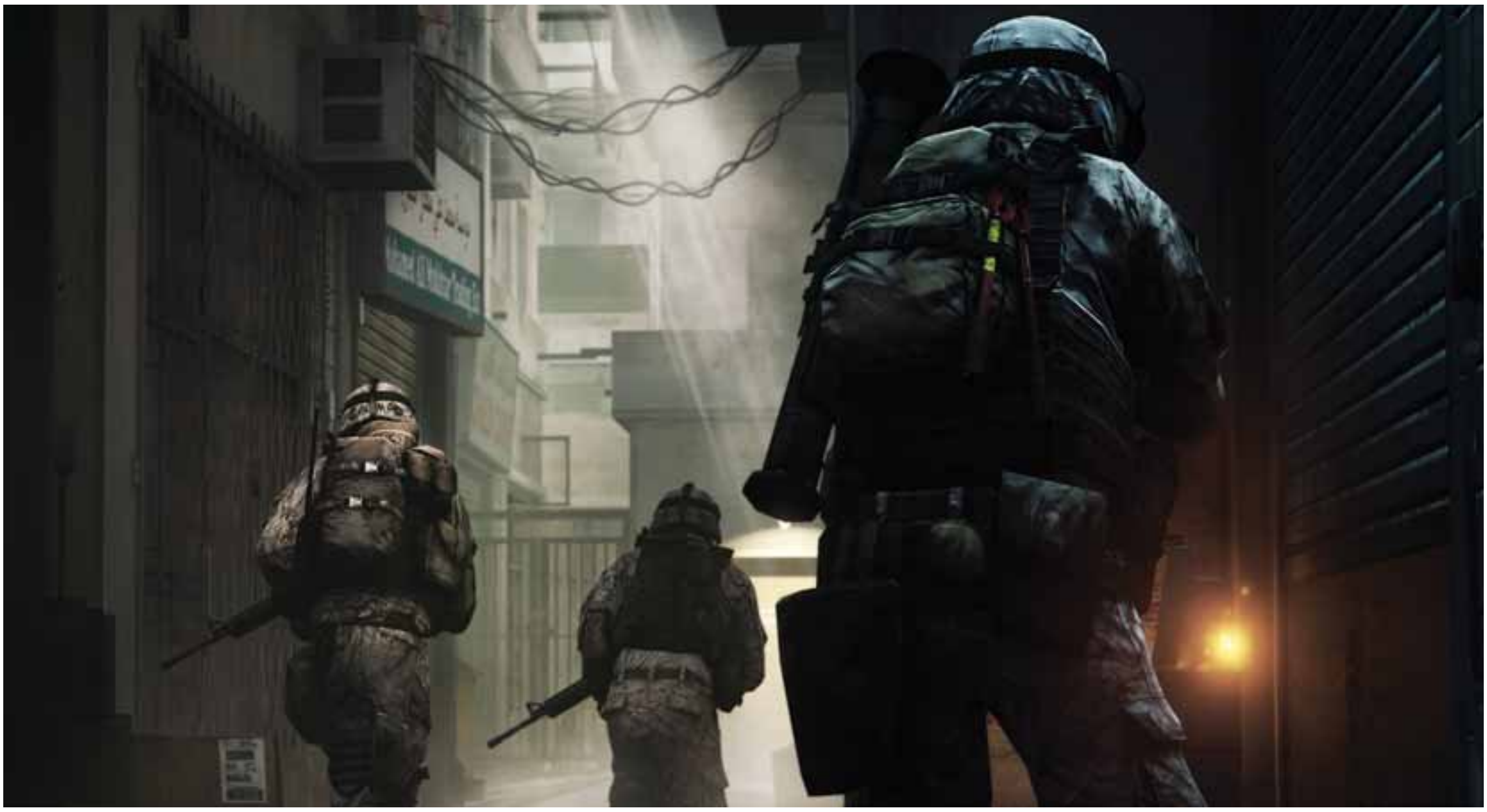
The service provider's CTO Michael Berger is quick to answer.

"In two words, quality and scalability," he says. "The amount of speech and dialogue in games is increasing dramatically. This has made it extremely difficult for developers to keep up without sacrificing quality, leading to lip syncing that is poor and distracting, especially in the context of high-quality game graphics.

As the lines of dialogue in a single game increasingly creep into the thousands, Berger says solutions like manual keyframing or motion capture become prohibitively expensive.

"Because our solution is audio-driven and 95 per cent automatic, it scales to these volumes," he says.

"Because it is based on 15 years of R&D in speech animation, we can achieve reliable and controlled results with unprecedented quality."



Lighting the way

Middleware provider Geomerics is revealing a range of new technologies at GDC 2012. **Will Freeman** catches up with founder Chris Doran to find what the company has planned for the biggest week on the games development calendar

Enlighten in action (main image), taken from Battlefield 3, developed by EA DICE. Above: Chris Doran, Geomerics founder

It's a little while since we last spoke to Geomerics. What have you been up to?
2011 was a breakthrough year for us. It started with our first deal in Japan, ended with our first deal in Korea, and saw the launch of the first titles to make use of Enlighten.

The reception to *Battlefield 3* has been awesome. Many of the reviewers were singling out the lighting for particular praise, which was great after all of the work we put in with the team at DICE. It's gone on to sell over 12 million copies and I think it has reset expectations of what can be achieved on the current generation of consoles.

What can you reveal about the new tech Geomerics is showing off at GDC?
It falls into three broad areas. We are increasing the number of supported platforms with the release of a mobile version of Enlighten, we are showing off new runtime technology on CUDA aimed at next generation hardware, and most excitingly, we are demonstrating a complete lighting pipeline for all types of lighting solution, from baking through to fully dynamic lighting.

You mention mobile; How do you see high-end technologies like Enlighten fitting into such a rapidly evolving space?
We started working on an iOS version of Enlighten last summer and were pleasantly surprised with the performance we saw. By porting Enlighten to the ARM cores on an A5 we were able to get close to console performance; definitely in the same ballpark, and close enough to make dynamic radiosity practical on today's tablets.

We'd like to see the GPUs improve a little so that dynamic direct lighting can get up to console standard, but you can see this happening very soon based on the roadmaps these guys are on. We now have Enlighten running well on both iOS and Android on a range of hardware, including Tegra and Mali.

> ***"I think some people are underestimating the potential of the PlayStation Vita as well. It is a seriously powerful piece of kit."***
>
> Chris Doran, Geomerics

I have to say I think some people are underestimating the potential of the PlayStation Vita as well.

It is a seriously powerful piece of kit. It may be based around mobile processors, but it will be capable of PS3 quality. Our message is that mobile is absolutely ready for triple-A quality games.

And how about your baking technology? Until now you have always talked about dynamic lighting. What motivated the move to a static technology?
You know, I don't think we fully understood what we had until we got to watch people using it in production.

That is probably true of a lot of products early in their life. While we absolutely believe that the future of lighting is to be totally real-time, it became clear to us that the artists were just as excited about the real-time workflow as the in-game capabilities of dynamic lighting.

As artists started playing with Enlighten they were able to achieve incredibly high quality purely through their ability to iterate and experiment.

When each new lighting configuration can be tested instantly, you can churn through ideas and refine them until you have just the look you are after.

If you have to wait hours each time you move a light, this option is simply not available. What we learnt was that, for game art in particular, the quality achieved by letting an artist iterate towards a look was always higher than could be achieved by the most advanced off-line renderers.

Once we started to understand the power of this way of working we started thinking about how Enlighten could be used in games that are not wholly dynamic at runtime.

Left: A demonstration of the results of baking the lighting into lightmaps with Enlighten

You say 'wholly dynamic'. Isn't dynamic lighting only one of two ways – you either are dynamic or you're not?
We used to think along those lines, but we now realise there is a whole spectrum of alternatives, from having all lighting baked into lightmaps and unchanged in a game, through to the other extreme of having every light computed dynamically with the radiosity updated per frame. There is a vast range of possibilities between these two extremes.

Can you provide some examples?
One example is a dynamic day-night cycle. In this scheme the sun is modelled by a directional light and casts dynamic shadows. But it only moves slowly, and the skybox changes colour slowly, so Enlighten has very little work to do at runtime to update the radiosity. You can leave Enlighten as a low-priority background thread and still get a gorgeous looking dynamic cycle. A second alternative is to use static and dynamic lights together, remembering that lighting is always additive.

Here some of the lighting information could be baked into static lightmaps, and some could be dynamic. Enlighten does not distinguish and just updates all of the bounced light correctly. This is handy for adding distant lights in a scene that have no role in the gameplay and are not going to change, and combining them with nearby dynamic lights that are more crucial to the gameplay.

A third example is to update all of the bounced lighting on level load and then store the Enlighten output data and leave it fixed during the level. This is a good strategy for games where you frequently return to an area under different lighting conditions.

The difficulty with all of these hybrid lighting models is tying the visuals together in a single consistent manner. This is where Enlighten is particularly strong. If you use Enlighten for all types of lighting you can ensure that the results are consistent regardless of the strategy you are adopting.

Presumably these all required differing amounts of runtime compute effort?
Exactly. More than one alternative might be appropriate for the same game running on different hardware. The more powerful the hardware, the more dynamic the solution you adopt. This will also be a great differentiator on a new hardware cycle. We wanted to ensure that all strategies could be adopted on a title from a single unified piece of middleware.

> **“*As artists started playing with Enlighten they were able to achieve incredibly high quality.*”**
>
> Chris Doran, Geomerics

So what did you have to add to Enlighten to make this possible?
With the radiosity – or 'bounced light' – already computed in real time we had already solved what was generally thought to be the hardest part of the problem. We could use this to construct a workflow where the artist could move lights around and instantly see the effect before finally saving out the results.

In order for this final step of saving the results to a lightmap to be performed within Enlighten we had to introduce two new pieces of technology. The first is the ability to ray-trace the direct lights. This helps achieve the highest quality soft shadows from the direct illumination.

Fortunately, ray tracing direct lights is a fast operation and well understood, so adding this was not too challenging. The trick was to make sure that our dynamic preview was as close as possible to the final baked output.

The second piece of technology was the ability to save out all of the calculations in a single lightmap. This is more a piece of software plumbing, but it did give us a further opportunity to expose some additional controls to the artist. By computing each direct light and the radiosity independently we could give the artist some simple compositing tools, which gave them even greater control over the final results, again in a fully real-time environment.

Does your baking technology take you into competitor's territory?
It does a little, but remember that we are the only people offering a fully dynamic runtime solution, so our workflow is quite different as it is based on instant feedback. Most of our competitors have put all of their efforts into an advanced black-box renderer.

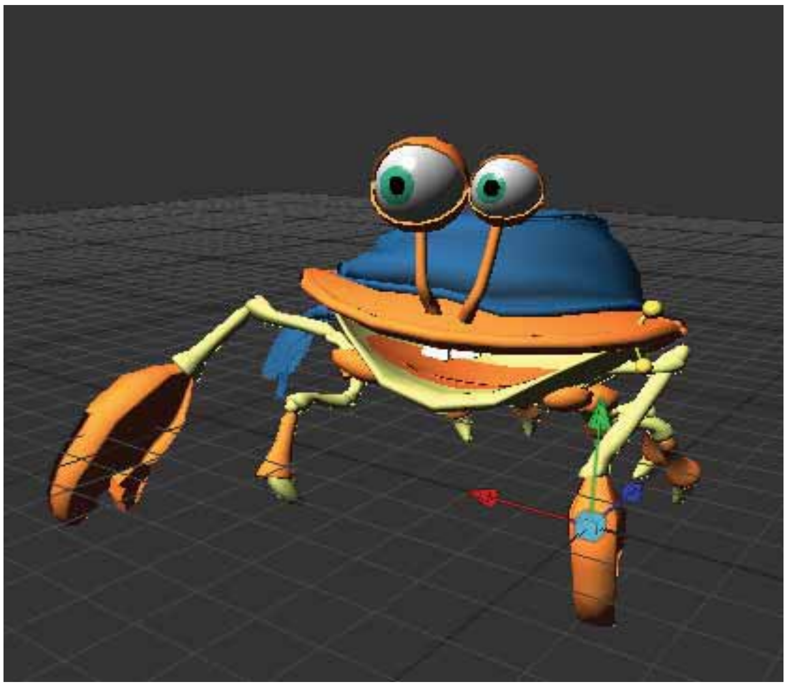
The artist will feed in geometry and lighting data, and waits and hopes that the final results are what they were after. Also, by offering Enlighten we hope that developers who would usually opt for a wholly static baked solution will start exploring some of the potential for more dynamic alternatives, working their way along the continuum to fully dynamic lighting.
www.geomerics.com

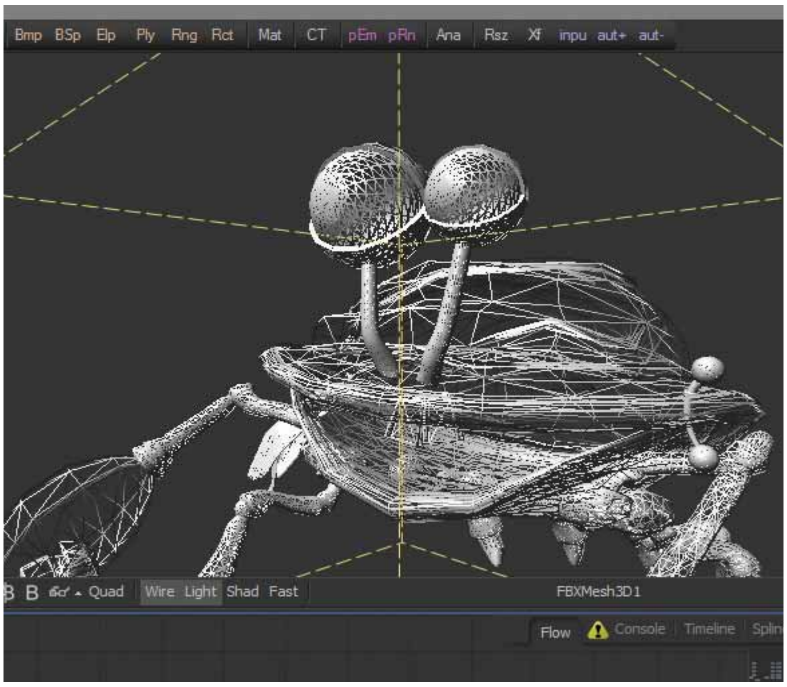
Geomerics will be demonstrating all of its new tech at GDC 2012. You can see it in Business Suite 215, or on the show floor at the NVIDIA, Intel, ARM and Imagination Technologies booths

KEY RELEASE

Will Freeman looks at Eyeon Software's Fusion 6.3 compositing tool

WHAT IS IT? A node-based compositing program
COMPANY: Eyeon Software
PRICE: $2,495 per license, with the first year of subscription included. $495 annual subscription fee
www.eyeonline.com




Bmp BSp Elp Ply Rng Rct Mat CT pEm pRn Ana Rsz Xf inpu aut+ aut-
B B Quad Wire Light Shad Fast
FBXMesh3D1
Flow Console Timeline Splin

Blazej Floch of Eyeon Software says Fusion 6.3 offers various tools for fast volumetric rendering whilst also allowing developers to edit and compile OpenCL code on the fly

HAVING EXISTED on the market for a remarkable 24 years, Eyeon Software's node-based compositing program Fusion has long spanned the film, broadcast, commercial and video games realms.

The tool also sports a sophisticated 3D-environment which allows connecting and sharing of data with any 3D application; a feature that has no doubt contributed to the success of the solution, which recently underwent a significant overhaul in the form of its 6.3 update.

"Similar to feature film, game developers ask for better looking cinematics in a shorter timeframe," says Eyeon Software's Blazej Floch in introducing the tool. "Fusion is the artist's Swiss Army Knife. You can easily link to existing 3D geometry or import pre-rendered sequences from your design department.

"Using Fusion's fast, high-quality OpenGL rendering and OpenCL tools, such as Volume Fog, one can easily add that special look and feel to the cinematics and still meet tight deadlines on a daily basis. OpenCL Fuses, a special class of tools which allow editing and compiling OpenCL code on the fly, allow developers to add their own magic. Also, scripting in either LUA or Python helps to automate the workflow and adapt the pipeline to each individual's needs."

FINISHING TOUCHES

While in essence Fusion is a tool targeted at digital content creation, such as finishing animations or creating animated textures, various features mean that it can be hugely useful for automation in asset creation, or the important task of prototyping for visual processing. The fact that it is driven by scripts – and the simple matter of composition files being ASCII based – means that Fusion users can create a rendering and compositing pipeline of 2D assets and animations.

"Fusion uses various techniques which make it useful for prototyping, for example the import of FBX files and rendering of CG shaders," offers Floch. "Also, with Fuses, OpenCL image processing plugins can be written by using LUA as a host for easier prototyping."

Recently used by numerous studios including Ubisoft and Pendulum, Eyeon Software has chosen to focus much of the energy put into the 6.3 update on expanding the OpenCL feature set.

The update introduces new lighting capabilities to generate a wide variety of volumetric effects in what its creators maintain will be a fraction of the time of traditional 3D renderers.

> ***"Similar to feature film, devs ask for better looking cinematics in a shorter timeframe. Fusion is the artist's Swiss Army knife."***
>
> Blazej Floch, Eyeon Software

Fusion 6.3 also ships with tools created during the production of director Roland Emerich's recent celluloid political thriller Anonymous, on which Eyeon Software worked with renowned film production outfit Uncharted Territory.

"The 6.3 release introduced various tools for fast volumetric rendering," states Floch of 6.3's most significant additions, adding: "The most exciting being the Volumetric Fog tool which allows the artist to flood rendered 2D images with real volumetric fog by using the World Position Pass. All of this is accelerated with OpenCL and is highly interactive."

ANOTHER DIMENSION

A further strength of Fusion 6.3 is its ability with 3D visuals. It has been used in stereoscopic films for an incredible 12 years, putting it well ahead of the latest wave of 3D technologies and movie releases.

"Fusion offers a real 3D environment which can easily import and export 3D data and animation, a very flexible procedural and node-based way to define shaders and all the extensibility you can imagine," explains Floch. "Fusion also has a particle system which fully integrates and renders in the 3D environment. The complete 3D system can be used in stereoscopic 3D, while all major output formats are supported."

Created by artists, and used by both freelancers and established studios with four-figure headcounts, Fusion is certainly a tool with a heritage rooted firmly in the games industry. The team that maintain and develop it are clearly devoted to the sector; so much so that Fusion itself even contains a hidden game of a somewhat mysterious make-up.

"The developments occurring within the games industry are very exciting," concludes Folch. "On one hand, realtime 3D comes close to the quality that we are accustomed to from film production. This does not mean that the industry adapts methods from Hollywood, but that more and more realtime techniques are used during production.

"On the other hand, mobile devices have shifted time back and low-end 3D content – as well as pixel-based graphics and animation – are in heavy demand once again. This has not only reminded us of 'the good old times', but also allows the independent developer to gain ground with a very large audience."

Available through numerous resellers such as bluegfx, Fusion 6.3 is emerging as a tool likely to be increasingly prominent in the global games industry.

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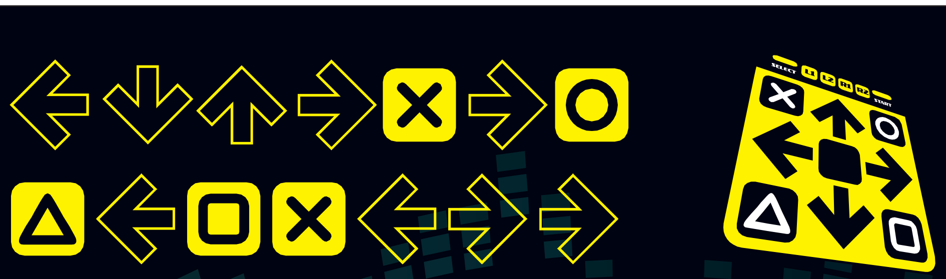

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EPIC DIARIES

Mark Rein investigates UE3's role in Asura's Wrath

CyberConnect2 producer Kazuhiro Tsuchiya says Unreal Engine 3 helped the team create its unique art style for its over-the-top scenes in Asura's Wrath

CAPCOM AND CYBERCONNECT2 have combined forces for the much anticipated brawler, *Asura's Wrath*, set for release during mid-February.

The action adventure game is set in an alternate reality called Gaea, blending science-fiction elements with Asian mythology, and combines shooter action with grand-scale combat. Capcom has positioned *Asura's Wrath* to launch as a new franchise, and they chose to develop their new game using Unreal Engine 3.

Kazuhiro Tsuchiya, producer of *Asura's Wrath* at CyberConnect2, says of Epic's game engine: "This was actually the first time we've developed a game using Unreal Engine 3, and it provided the most effective environment for developing a game, whilst managing resources most efficiently."

Tsuchiya adds that UE3 reinforces the three core concepts of the studio: idea, knowledge and technology. He explains: "These are all important, and although one factor may weigh more than the other at one given point, overall it should be even as all are essential."

CyberConnect2 has been making games for more than 15 years, most notably fueling hit franchises such as *.hack* and *Naruto: Ultimate Ninja*. With such a distinguished record of development, the team had no problem diving into Unreal Engine technology to bring this new original IP to life.

The game itself follows the eponymous hero, the demi-god Asura, one of eight Guardian Generals known for his victory against the evil Gohma. But in spite of his impressive military career, including slaying the monstrous Gohma Vlitra, Asura is framed as a traitor by his fellow generals. Asura's wife is killed and his daughter taken from him, leaving him expelled from Heaven, cast to earth, and left for dead. But after 12,000 years, Asura awakens and is consumed by the need for revenge and to reclaim his daughter.

Tsuchiya describes the storytelling approach of *Asura's Wrath* as more akin to a TV drama than a traditional game, and the developers worked to intertwine the mechanics of the game with the story that they wanted to tell.

"During development, we wanted to bring something new to the action genre and to blend action and drama in a new way," says Tsuchiya. "We also wanted to blend cut scenes and action sequences seamlessly throughout the whole game.

"*Asura's Wrath* offers different play styles in each episode, rather than simply repeating the same action again and again in different maps. This means there are different game systems like combat action, shooting elements, quick time events, and so on, as Asura encounters different situations."

Tsuchiya's team utilised UE3 to incorporate a unique art style into the game's science fiction and Asian mythology-fused environments and characters, which he says "stylised our crazy over-the-top scenes."

Tsuchiya said UE3 empowered his team to craft a truly immersive experience that entices the player into the game world in the same way that Hollywood TV shows hook viewers. The team was also able to add a sense of malleability to the game, and even cinematics can be interrupted, impacting the outcome.

The gameplay stands out from other action games. Battles, such as one waged between Asura and Angus, are huge, boss-style engagements. Gameplay involves combat with katanas and swords, as well as shooting and evading beams of energy bullets.

Aiding players along the way is a Rage meter, which allows players to power up to take on the game's many enemies.

CyberConnect2 is hoping that good things come in threes. With UE3 bringing this visually impressive, action-packed game to life, the developer could have a third successful global franchise on its hands.

UPCOMING EPIC ATTENDED EVENTS:

GDC 2012
San Francisco, US
March 5th to 9th, 2012

Gadget Show Live
Birmingham, UK
April 10th to 15th, 2012

Please email: ***licensing@epicgames.com*** *for appointments.*

To discuss anything raised in this column or general licensing opportunities for Epic Games' Unreal Engine, contact: **mrein@epicgames.com**

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Canadian-born **Mark Rein** is vice president and co-founder of Epic Games based in Cary, NC. Epic's Unreal Engine 3 has won Game Developer magazine's Best Engine Front Line Award eight times, including entry into the Hall of Fame. UE3 has won four consecutive Develop Industry Excellence Awards. Epic is the creator of the mega-hit *Unreal* series of games and the blockbuster *Gears of War* franchise. Follow @MarkRein and @UnrealEngine on Twitter.

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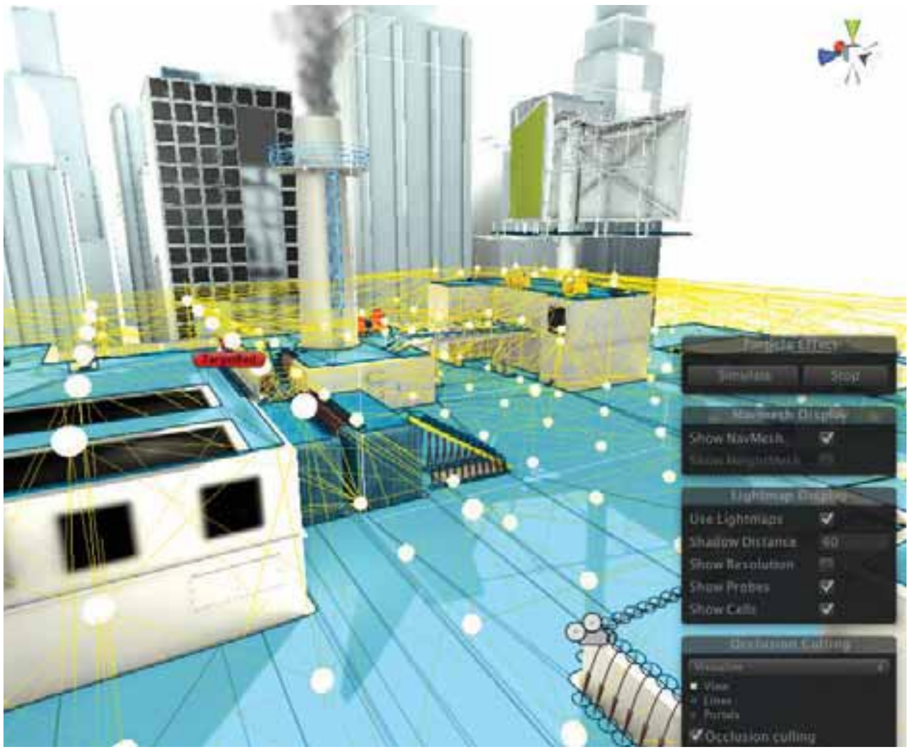
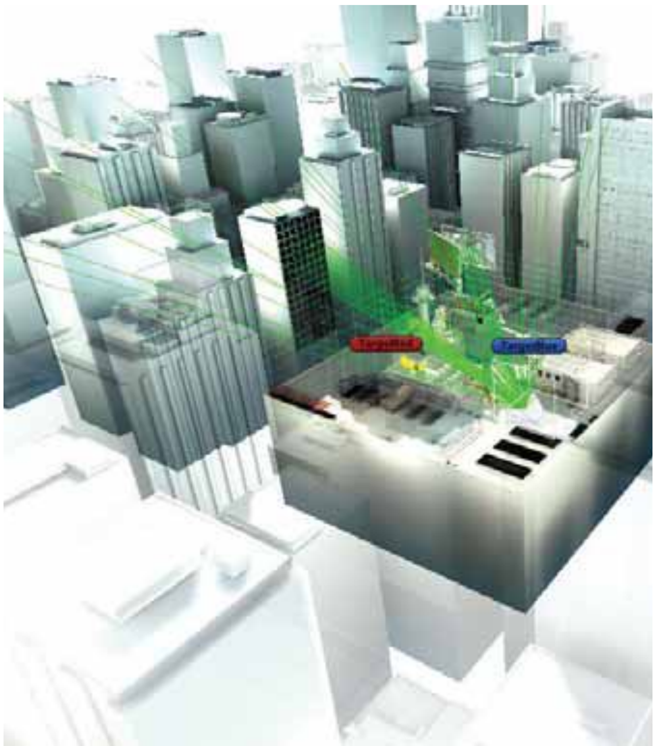
UNITY FOCUS

Unity CEO David Helgason explains why the 3.5 update matters to triple-A

UNITY'S 3.5 UPDATE
Developer: Unity
What is it? The new version of the popular engine, which adds features designed to attract triple-A devs
www.unity3D.com/preview





The features introduced as part of the 3.5 update to Unity (above, left and right) give the engine triple-A power, says CEO David Helgason

AFTER A WAIT that has kept developers large and small on tenterhooks for months, Unity 3.5 is ready for release. What does it mean for games developers? CEO David Helgason reveals all.

Where does the 3.5 update take the engine? It seems to be quite a reinvention.
Just over a year ago we took a very strong decision. We saw that, while lots of small teams are using Unity, a greater number of much bigger teams were starting to use Unity, and they were doing more ambitious things with the engine.

Those bigger teams needed things that we hadn't focused on before. So we decided to focus on triple-A games with Unity 3.5 – which of course means high-end technologies – but also means a focus on large team workflows. We knew at that time that we fell short in both those areas, so we started to hire engineers with triple-A backgrounds who have worked with triple-A engines at big studios; people like the Dice guys who'd worked on Frostbite and the IO guys who had worked on Glacier. We found that those guys were the best we could get.

So opening Unity to triple-A has taken a significant investment of effort?
Yes. That was the time when internally in the company we laid out what we've called 'the triple-A initiative'. We haven't defined triple-A as a binary thing where you either are or are not that kind of studio. We knew that within a year we wanted to close the gap between Unity and other engines; be they in-house engines at studios or the kind that are focused solely on that very high quality. So that's what we did, and it's gone really very well.

Does the move towards triple-A also mean that you're also now offering that level of quality to the smaller teams that were Unity's traditional audience?
Absolutely. The one thing that was important to us was this: just because it is better doesn't mean we want to charge more for it. If we did that it would betray the whole idea of Unity.

We didn't really want to change our business model either. It should still be about more technology for the same price, for the same people in a way.

> ***"We decided to focus on triple-A games with Unity 3.5 – which of course means high-end technologies."***
> David Helgason, Unity

We also didn't want to over complicate things, so we wouldn't allow ourselves to go overboard with something that was too specialised. We didn't want it to become too complex or unwieldy. We could do it, but it has to keep the same level of simplicity.

So you had to move slowly to balance triple-A performance and your mantra of 'democratising games development'?
That was actually part of the reason we delayed the release. Some of the new triple-A features could be created in isolation in a week, but would take an insane amount of work and a lot of time to make sure they were properly integrated with the rest of the system so that it didn't get too complex. We had to be careful to add the new triple-A features without making it something that Unity isn't.

Take the new pathfinding abilities. They were easy – or at least relatively easy – to build quickly, but then it turns out that making the pathfinding work with things like Unity's additive loading took a lot of work.

But the results are incredible, and it's been worth the time.

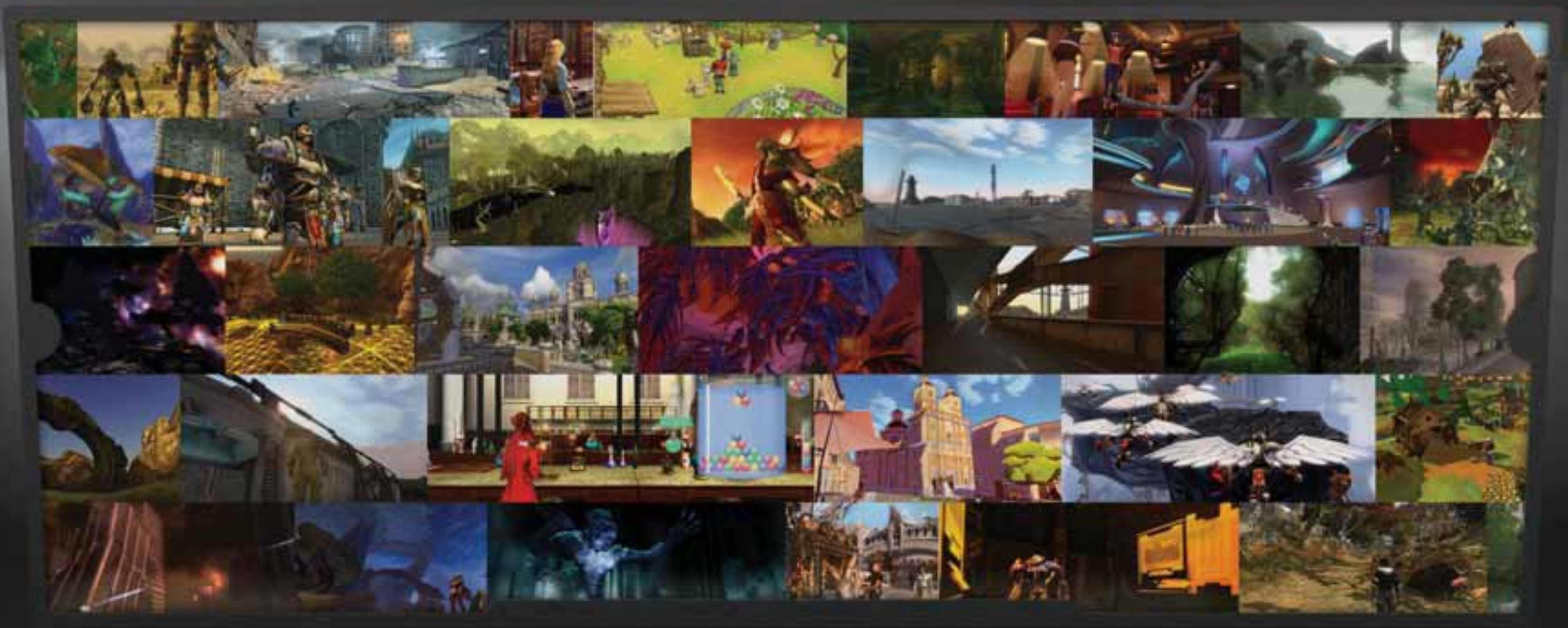
It's basically a triple-A engine with the simplicity we had before, which is awesome.

There's been a lot of coverage everywhere of Unity's move to support Flash deployment, but what about the new support of Google Chrome Native Client deployment? Why is that significant?
Mainly it is because Chrome is getting insane levels of adoption right now; the last number I saw was over 30 per cent.

The main thing about the Chrome browser is that it automatically updates itself, so if you're supporting Chrome you are supporting just one browser that is this beautiful thing. Google added the technology called Native Client, which we've all been waiting for for years. I think we showed our first demo of Unity running in Native Client almost three years ago. Now it is available you can build a web game with Unity that runs in there at close to native speed with pretty good graphics. It's somewhat feature limited, so it's not the full thing, but it's pretty close.

And again it's completely frictionless for anyone that knows Chrome.

With our own plug-in and the Flash export and the Chrome export we've pretty much cornered almost the entire browser market. There's almost nowhere where Unity won't run, and nowhere where it won't run pretty well.



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HEARD ABOUT

John Broomhall talks with Naughty Dog's audio experts Bruce Swanson and Derrick Espino about the inspiration for Uncharted 3: Drake's Deception's sound

Uncharted 3: Drake's Deception
Developer/Publisher: Naughty Dog /Sony Computer Entertainment
Platform: PS3
www.unchartedps3.com

NAUGHTY DOG'S audio lead, Bruce Swanson, and senior sound designer, Derrick Espino, spearheaded a team making the third instalment of the popular *Uncharted* series sound as good as its predecessors.

"I've worked on each title in some capacity," reflects Espino. "When I was asked to become senior sound designer on the third game, I figured it was because I understood the aesthetic of the game. I got involved early enough to be looking at initial storyboards.

"Because I come from a post background, my favourite sound designers are guys like Ben Burtt and Randy Thom – guys who get on a project early, mentally and creatively preparing themselves for what's coming. I did that as best I could but I found out it was like standing at the bottom of an avalanche and strategising how much you were going to outrun it.

"The reality is that it will catch you and carry you away, so throughout the process, I just tried to maintain as much of that original vision as I could. Bruce and I sat down at the beginning and asked, 'what do we want this game to sound like? What do we want to keep from the last game? What should we improve on and what doesn't need improving?'"

MAKING A SPLASH

"Because *Uncharted 2* made such a splash, I think a lot of fans would be disappointed if everything was different – so we certainly kept a few legacy sounds," continues Espino.

"My job was to make sure the scenes were really being sold by audio – but also remained true to the *Uncharted* universe. When we started adding more sound designers, I would get them acclimatised to the view that Bruce and I held of how the game should sound.

"Once we had a sort of template and aesthetic, it was important to reel everybody into that place. The designers would often hear me say, 'let the sound live'. I think in the past in games, because of technical limitations like memory constraints, sounds have sometimes had a very short life in the temporal space they play in – they happen and then they're gone.

"Because this is like a film – a very cinematic experience – we try and make those sounds really live in the world. If Drake slams a gate, then you'll hear the very end of that gate rattle away. It's not just a truncated impact. I wanted people to really feel like they're in that environment and make it as real as possible.

> ***I think a lot of fans would be disappointed if everything was different – so we certainly kept a few legacy sounds.***
>
> Derrick Espino, Naughty Dog

"Friends of mine who have played the game have been blown away, but the point is, they don't come to me and say, 'that explosion sounds great' or 'that gun sound is cool', they just say, '*Uncharted* blew me away' and that's what we're trying to do – make the whole experience one cohesive blockbuster. I don't necessarily want to hear, 'that sounds like a movie punch,' or something – I just want them to say, 'wow, the fight in the pub was awesome'."

"Our focus is on the overall experience rather than individual sounds," offers Swanson. "There are some designers whose sounds are going to be really 'present'. They're going to try and imbue that sound with as much of their design as they can. Sometimes we love that, and other times we don't.

EMPLOYING SOUND

"Sounds have a job. They're only players in a very large cast so there are times we'll have people add more detail and times we'll have them remove it because ultimately the experience is supposed to just wash over you and resonate in some way. We don't want anyone distracted, we want it to be felt."

Though the team is always interested in new tools and tech, Swanson believes it is creativity and hard work which are the driving forces.

"The truth is it's really a lot of elbow grease," says Swanson. "You keep your eyes on the prize. One of the biggest things in our arsenal is the dedication to the game and devotion to the craft.

Espino concludes: "Sure, we're interested in new tech but you can have all the tools in the world and if there's no creative heart behind using them, it's not going to matter. I don't even think technically half the time – I'm always thinking of the emotional reaction I want to get from a scene. Bruce and I both come from post so we're always asking 'is this really selling what Drake is supposed to be doing?' That's where the magic is."

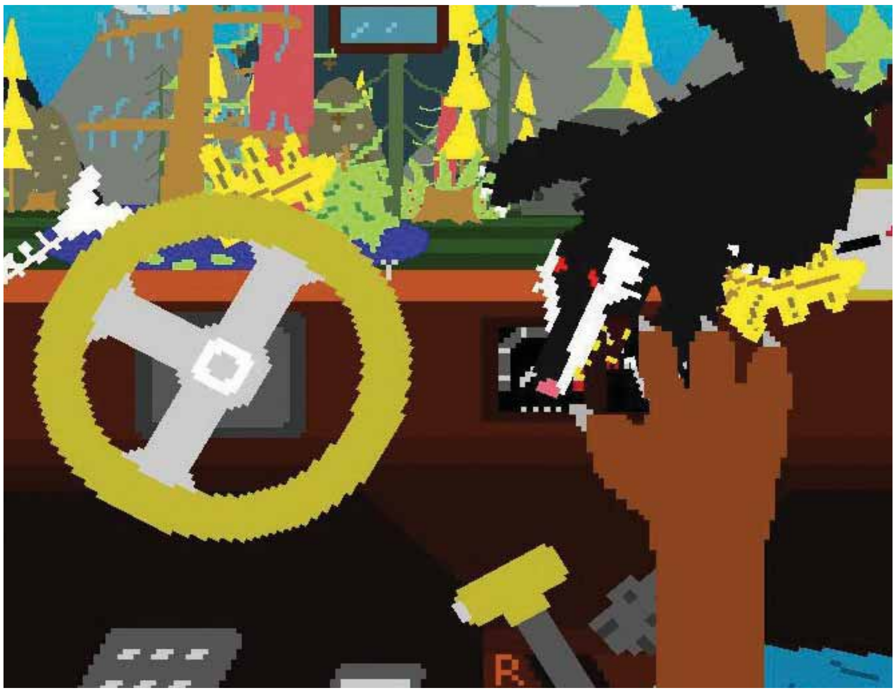
Naughty Dog's senior sound designer Derrick Espino (top) and audio lead Bruce Swanson (bottom) strived for sonic realism in Uncharted 3

John Broomhall is an independent audio director, consultant and content provider.
E: develop@johnbroomhall.co.uk
www.johnbroomhall.co.uk

REQUIRED READING: **BUTTONLESS**

In our latest series of book excerpts, we present a chapter from **Ryan Rigney's** compendium of iOS games, which tells the stories behind the creation of the best titles on iPhone, iPad and iPod Touch. The star of this piece is the strange and sometimes bewildering world of Blinkbat Games' Enviro-Bear 2010

Ryan Rigney's book Buttonless looks behind the scenes of the App Store's finest titles, detaling the emotions and challenges involved in development



SOMETIMES bewildering *Enviro-Bear 2010* isn't like a lot of the other games in this book. The controls are intentionally designed to be incredibly arduous, gameplay mechanics aren't explained to players in any clear way, and the entire thing takes place in a 'posthuman' world in which bears drive cars.

You play as the elongated right arm of one such car-driving bear. Yes, you read that correctly: players have control over just one of the bear's arms, and all tasks (holding down the gas pedal, steering, eating fish, etc.) must be completed using that arm. Plus, you have to switch between tasks quickly – fending off badgers at one moment, and slamming on the brakes to avoid trees the next.

Although nothing about the world of *Enviro-Bear* is spelled out explicitly, there is quite a lot of depth. Clever players will find numerous ways to interact with the environment. For instance, crashing into a large rock will cause a smaller chunk of it to chip off and land in your car. You can then use the rock as a weight on your gas pedal so that you can focus on steering around trees as you seek out food. The ultimate goal is for the bear to eat as much as possible in preparation for winter.

A banner commanding players to 'Hibernate!' will appear on the screen when you've eaten enough, and you'll have to search for a cave to safely drive into. The entire thing is nonsensically hilarious, but that's sort of the point.

BEHIND THE GAME

Enviro-Bear 2010 began as a response to a challenge: TIGsource.com's Cockpit Competition. The challenge required developers to create a game centred around cockpits in less than a month. There are plenty of things that developers could do with that concept: you could imagine a space-flight sim, a game about driving trains, or some sort of Air Force training program.

But Justin Smith's brain operates a little bit differently from yours or mine. "The original plan was to have squirrels driving a car through a post-apocalyptic wasteland, attacking other squirrel cars to take their nuts," says Smith. "You would be able to board the other cars pirate-style and swashbuckle with enemy squirrels. The car would be controlled by multiple rodents, each on a different instrument."

> ***"You have to switch between tasks quickly – fending off badgers at one moment, and slamming on the brakes to avoid trees the next."***

Apparently, multiple squirrels were too much to deal with in just a single month. Smith had what he describes as a 'panic attack,' and refined his somewhat insane game idea into something slightly more reasonable. Only slightly, says Smith. "I thought, 'what's easy?' Bears."

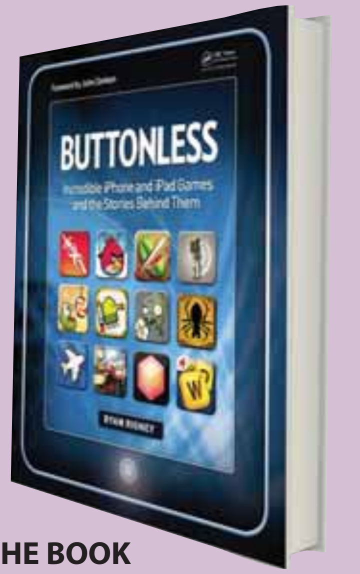
Smith calls the month that followed a boring process, and wanted to focus more on the post-mortem of the game in our interview. To make a long story short, he managed to finish his game within the deadline, and *Enviro-Bear* took home TIGSource.com's first place prize. Following the release of the PC version, Smith set to work on getting the game compatible with iOS. This took almost exactly one more month.

Once the game was released on the App Store, Smith saw most of his sales within the first month – things dropped off sharply after that. He credits this to a sort of '15 minutes of fame' effect and notes that much of the game's success is due to "hilarious trolls" on several online forums. "Some of the App-Store reviews people left were comic genius," says Smith.

He's not joking about that. I ventured into the App Store to read some of the top user reviews from those who had purchased *Enviro-Bear*, and I wasn't disappointed. "This game is impossible to control and I can never tell what's going on," claimed one customer.

"Badgers keep eating my fish and I don't know what's happening. This is the greatest game ever made. One million stars."

"Some games make you realise the actual power of the iPhone, both through their rich interactivity and high-quality graphics. This game combines that with a bear driving a car," read another. Other reviews were just as humorous. One reviewer claimed that the game cured his "mega AIDS" and landed him a job as a rocket scientist. Another said that it was a perfect simulation of life in Russia. "It raised my grandmother from the dead," one review concluded.


BUTTONLESS
Incredible iPhone and iPad Games and the Stories Behind Them
RYAN RIGNEY

THE BOOK

In *Buttonless*, author Ryan Rigney takes the reader on a tour that covers more than 65 of the best iPhone and iPad games, telling the never-before-heard tales behind them via over 100 interviews. The book chronicles the adversities that top developers have to overcome, and delivers numerous anecdotes from behind the scenes of the iTunes App Store

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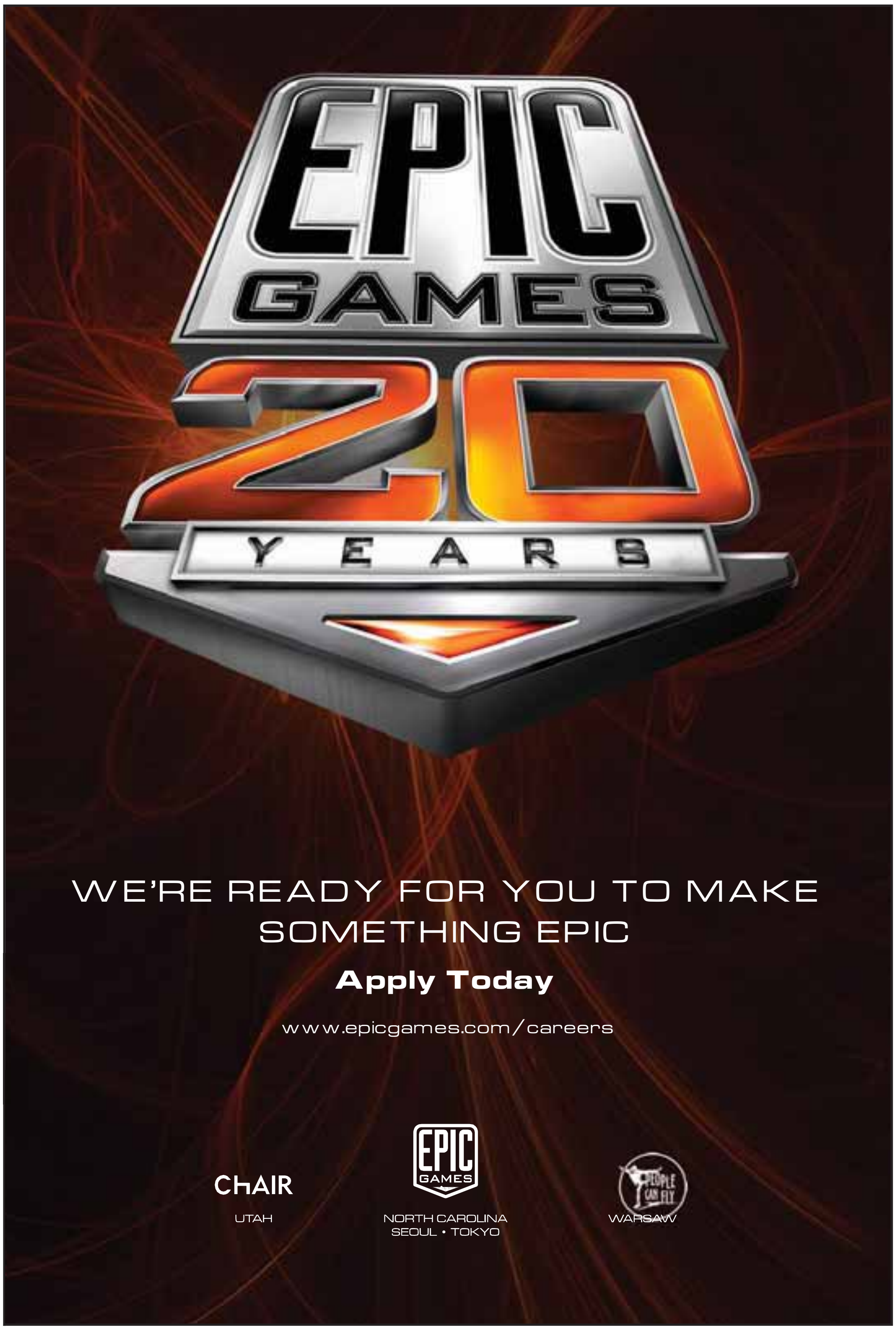
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RECRUITER HOT SEAT

We speak to Jagex's **Francesco Genovese** about why the studio is hiring in droves, and how to successfully land a job

BIO
Name: Francesco Genovese
Title: Recruitment manager
www.jagex.com/careers

How many staff are you looking to take on?
We have quite a lot going on at the moment, with *Transformers Universe* and *Stellar Dawn* in full production, *8Realms* recently launching, *RuneScape*, *War of Legends*, and so on.

Let's just say we like to keep ourselves busy. In order to support these products in the best possible way, we are always on the lookout for fresh talent. At the moment, we have about 45 vacancies live, so if you're looking for your next role, get in touch with us.

From what fields are you recruiting?
It would be easier to tell you from what field we aren't trying to recruit. We're hiring in practically every discipline; we need game engine programmers, product analysts, UI artists, testers, designers and more. We're even recruiting for a receptionist for our new Cambridge headquarters.

What does your company offer that other studios don't?
Great culture. We're truly a unique company to work for. We pride ourselves on our culture and show respect for our staff. We want people to thrive and innovate, and we do all we can to ensure each day fills employees with that 'buzz'.

As well as that we have amazing people working here. The Jagex ranks are packed full of the most gifted and talented individuals within the games industry. People can flourish here. Working alongside the industry's best is a gift in itself.

We also offer stability. We are a truly blessed company, having grown into the UK's largest independent studio and achieved considerable success and stability. We're proud of who we are and what we've achieved, and we're excited about our future.

What are the perks of working at your company?
First of all, working with some fantastic IPs – such as *Transformers Universe* – and a lot of very talented, passionate and experienced professionals. We also offer an extremely competitive benefits package including private healthcare, gym membership, an annual performance bonus, fresh fruit, bicycle repair, five and 11-a-side football teams, a cricket team, quarterly team-building events, epic company parties, training workshops, an on-site canteen, as well as many other perks.

Who is the best interviewee you've ever had and what did they do?
Quite a few years ago we were recruiting for a CTO. Being a tough role to recruit for, we expected it to take a few months to find the right person. We were wrong.

We had just started the first round of interviews when we received the CV of an interesting applicant who, on paper, seemed really strong. When we invited him for the face-to-face

GET THAT JOB

We ask recruiters how you can score that promotion or move to a new role

THIS MONTH: FINISHING YOUR FIRST GAMES PROJECT

"Finishing a game and releasing it really is a big deal and it will immediately set you apart from the rest and. The more polish ithas the bigger chance you have of employers asking you to interview.

"If it is your first game start out with a simple project that you can make in three or four weekends and then spend another two weekends polishing it.

"It doesn't matter if the game is a simple clone of doodle jump; just make sure it's polished and bug free.

"The goal is to make a simple game that shows you can get from the start of a project to the end and release it.

"Trying to make your own game engine won't get you anywhere. You are much better off using an existing engine and improving the graphics for it if you want to show off your OpenGL/Direct X skills."

Leo Brennan,
Game Developer, Bossa Studios

SIX-SECOND STUDIO SPOTLIGHT

- *Tequilla Works was launched in* Madrid back in 2009 by Raul Rubio and Luz Sancho
- The studio specialises in creating digitally distributed and 'experimental' games
- Rubio says the studio aims to create "small and tasteful" games, mixing tradition and innovation
- It is currently working on its debut title for XBLA, puzzle platformer *Deadlight*, currently slated for a Summer 2012 release
- Tequilla has a core team of 18, with backgrounds at companies such as Blizzard and SCEE
- It is currently modeling itself as a 'boutique' studio

interview, he blew us away; not only did he have a very strong technical background, but his commercial acumen was also impressive. He'd done his homework and knew pretty much everything about us, our games and our tech.

He was incredibly passionate and a great communicator, and our CEO at that time was so impressed that he almost offered him the position on the spot at the end of that interview. Well, not only did we offer him the CTO position, but after a few years, he ended up as our CEO. And that's how Mark Gerhard joined us.

And the worst?
The worst applicants are the ones who haven't spent any time at all researching us before their interview.

What are your tips for succeeding in an interview?
Do your homework before each interview. Normally your interviewer will spend about 30 minutes going through your CV, your portfolio and your websites before the interview to make the best use of your time. The minimum you can do is to spend as much time as possible researching the company, what games they make – try them, what tech they use, and so on. This will help you massively during the actual interview.

Also, try to control your stress. There are a few things you can do before the actual interview to put yourself at ease: do your homework, rehearse with a friend, prepare a list of questions to ask at the end, and try to find some information about your interviewers. Check their LinkedIn profiles, Google their names and so on. Don't be afraid to show your passion. Be yourself, honest and concise.

The UK 'Brain Drain'; is it a serious issue, or over-exaggerated?
In the last 18 months, I've travelled across the UK to visit several less fortunate studios that, for one reason or another, had to let staff go. I've met so many passionate, experienced and inspiring professionals that I simply cannot agree with the idea of a UK brain drain.

> ***"The worst applicants are the ones who haven't spent any time at all researching us before their interview."***

The UK still produces a large number of the most talented professionals and graduates for the games industry.

Having said that, there are still a few disciplines suffering a shortage of experienced professionals in the UK, forcing gaming companies to look abroad. These are roles like UI experts, product analysts and social games designers.

Why should devs still be interested in working for a big studio when going indie is a popular option?
I'm a fan of indie development; I think it brings a breath of fresh air to our industry. But working for a big studio gives you the chance to grow, to confront yourself, and to share your knowledge and experience with a large number of industry professionals who are as passionate as you.

NEW STUDIO ALERT!

A NEW DIGITAL studio based in London called Hutch Games has been founded by five former console developers.

Formed in June 2011, the outfit has just released its first game on iOS, *Smash Cops*, which has gone on to top the charts in the US, Canada and Australia, while thriving in Europe.

"Our goal is to challenge the status quo, whether that be in player controls like *Smash Cops* or in areas with accepted annoyances in social, freemium, mobile, location, storytelling, business models, or even changing the way we work," says Technical Director Sean Turner.
www.hutchgames.com

MOVERS AND SHAKERS

This month: Jagex, Splash Damage and Big Fish Games add experienced professionals to their teams

JAGEX ■ *Runescape* developer Jagex has appointed former Rockstar art and animation director **ALEXANDER HORTON** as chief creative officer as part of the studio's preparation to enter the "mass market online gaming" sector with titles such as *Transformers Universe*.

"Jagex has been around ever since I've been in the industry and it's been amazing to witness their development and creativity in the online gaming space over the last decade," said Horton.

"Multiplayer browser-based online gaming is the future and I am hugely excited and honoured to be a part of the UK's largest independent development space in this environment. Jagex is certainly the place to be."

Whilst at Rockstar, Horton worked as leader animator on *Grand Theft Auto 3*, as well as working on titles including *Manhunt* and western *Red Dead Revolver*.

Most recently he has been freelancing for almost three years as a consultant and designer for clients such as EA and DefJam Entertainment, specialising in disciplines including art direction and virtual cinematography.

SPLASH DAMAGE ■ London-based studio Splash Damage has snapped up former EA executive **GRIFF JENKINS** (*above, left*) as its new director of production.

Jenkins oversaw promotion and building up of the publisher's major franchises from *FIFA* to *Need for Speed* whilst working as senior development director at the company for seven years.

"Following *FIFA's* incredible success, Jenkins's new role at Splash Damage will improve our games by improving the way we make them," stated the *Brink* developer's CEO Paul Wedgwood.

"Under his leadership we'll elevate production to a discipline on par with art, design, and programming. These are areas that we've always constantly strived to improve, and production should be no different."

In a busy month for the studio, it has appointed former Ninja Theory lead gameplay programmer **MARC FASCIA** (*above, right*) as technical director. He will oversee all engineering teams at the company.

Fascia has previously worked on games such as *Enslaved: Odyssey to the West*, and has worked in the industry for over 13 years.

"I'm really happy to be trusted with this incredible responsibility at Splash Damage," Marc Fascia said.

"We're working on some great things, and managing such a big and talented programming team, across multiple varied and challenging projects. It's a wonderful opportunity."

BIG FISH GAME ■ Seattle-based casual games publisher Big Fish Games has hired ex-Rovio and Microsoft marketing head **WIBE WAGEMANS** to head up its mobile business.

Wagemans, who flew the Rovio nest back in October, previously held the role of SVP of global brand advertising at the *Angry Birds* developer, and before that was head of global marketing for Microsoft's Bing for mobile.

"Wibe is a data-driven brand steward who understands the distinct needs of mobile consumers and how to scale a growing portfolio of first and third-party content to mobile fans worldwide," said Big Fish CEO Jeremy Lewis.

"With the addition of Wibe, we add another tremendously skilled member to our team."

KONAMI ■ Konami has been through a significant restructuring of its top ranking staff, naming **TOMOYUKI TSUBOI** as president of Konami Digital Entertainment.

He replaces **SHINJI HIRANO** (*above*), who has assumed the role of president of Konami Digital Entertainment Europe.

Tsuboi, who has been at the company for 14 years, is to look to expand the business and build its success around franchises such as *Metal Gear Solid, Pro Evolution Soccer* and *Silent Hill*.

Hirano, meanwhile, takes over from previous Europe head Kunio Neo, taking on similar roles to Tsuboi.

SERVICES SPOTLIGHT

This month: **Nimrod**

Nimrod is an audio company that has been providing music compositions and productions to the industry since it was formed by Marc Canham and Rich Aitken in 2001.

Now offering its services to studios around the world, Nimrod has provided scores for industry giants including Nintendo, EA, and Ubisoft.

"Nimrod has grown very organically over the last 12 years and we've introduced new services at very logical points in our growth," says production director Rich Aitken.

"Being one of the only truly 'one-stop-shop' audio companies gives us great flexibility, from our world-class NSO orchestral team, production crew and composers, a growing voice-over studio, Nimrod Music Supervision and now our DLC Studio."

The new DLC Studio has been designed to help developers working to tight deadlines and lesser budgets when producing downloadable content for games and smaller iOS projects.

"We've set out to tailor our services including production, composition, mixing, voice-over and music licensing to fit neatly in to these more compact development schedules at a fraction of the cost," explains Aitken.

"This ensures you get all the quality you would expect from Nimrod, but within the budgets available for these great projects."

Aitken says that music has become an essential part of the gaming experience as the industry has progressed over the last ten years, with the sector making ever larger budgets available to musical scores.

"Well written, well recorded, and well utilised music is essential for any visual entertainment and art form – the real skill is knowing when to use it as your silences can be more effective than the music-led moments."

Having begun to also progress into the film industry – a sign of how the games industry and its services are edging closer in quality – Aitken says that as well as launching DLC Studio, the company is also planning to open a new studio and mixing facilities as it looks to expand.

"In the last few years Nimrod has begun expanding in to film which has been very exciting, and this recognition that a company that began life in video games can cut it in the film word has been very rewarding," says Aitken.

"On top of this the studio is ever expanding, and plans to have a Dolby accredited mixing facility and a London based satellite studio accompanying the Oxfordshire HQ are firmly afoot."

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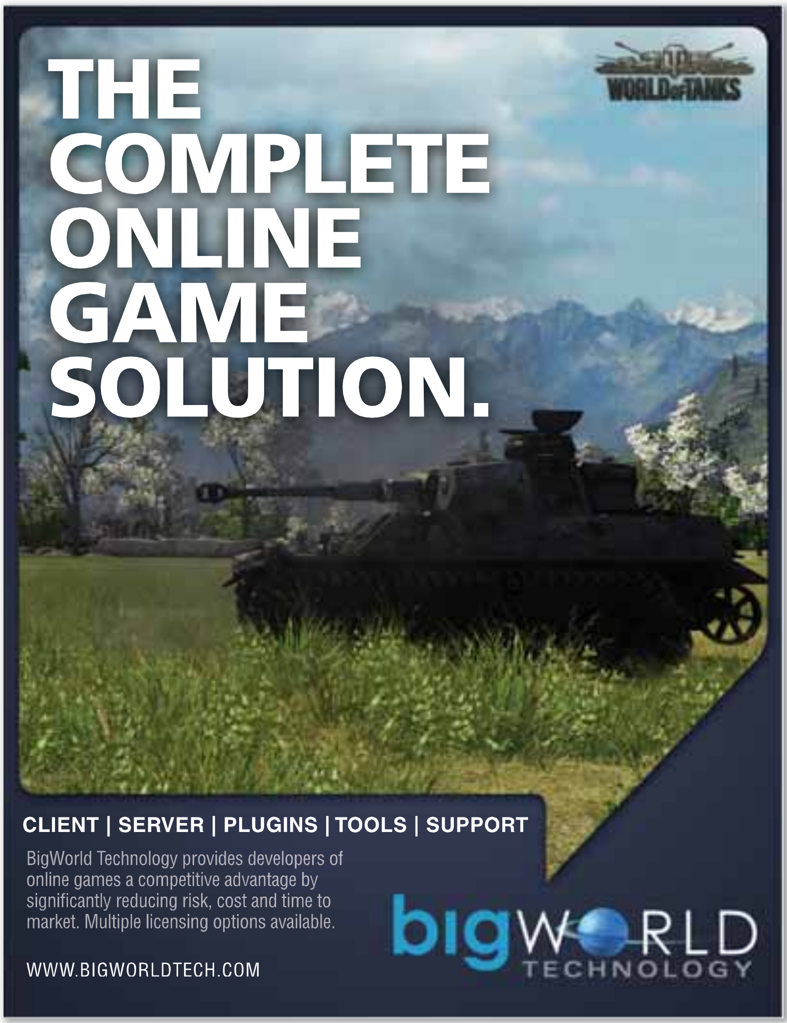

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TOOLS SPOTLIGHT

This month: **Audiokinetic**

Audiokinetic is an audio middleware provider that offers specialists tools such as Wwise and SoundSeed.

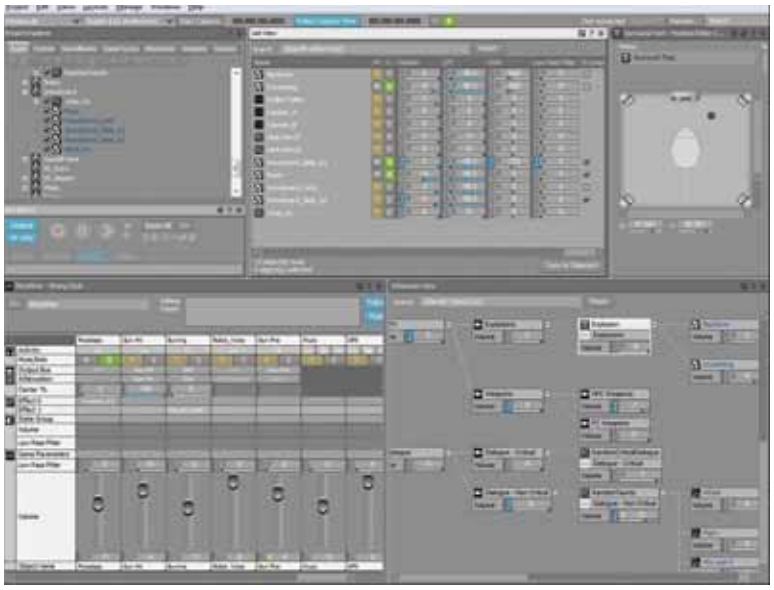
Formed in 2000, the firm released the first version of its audio pipeline solution Wwise in 2006, and has shipped 19 major releases since then, with the next update expected to go public in March.

"Our goals were to enhance the audio experience in games while reducing development costs with a streamlined workflow, adapted tools, cross platform development, and a highly optimised sound engine," says Audiokinetic co-founder Simon Ashby.

"In two words, our ambitions were to become the industry standard. It is still our ambition today and many people think that we are at this point now."

The longstanding middleware, which has been used titles such as *Star Wars: The Old Republic*, *Batman: Arkham City* and *Mass Effect 2*, helps manage audio content in areas such as behaviours, dynamic mixing, localisation and platform customisation.

"It helps the audio team to be more creative by removing a lot of dependencies – on programmers or build processes – and offering a framework that allows fast iterations and runtime mixing," explains Ashby.



As well as Wwise, the middleware provider develops other tools such as SoundSeed, a family of interactive sound generators that can help designers reduce memory usage to create audio content by using digital sound processing tech.

After the company's success with Wwise over the last five years, Ashby says that the firm is now looking to expand into new territories with its technology, particularly into the rising Asia market.

He also reveals that it will be announcing new partnerships at GDC, such as with Boston-based audio tech outfit iZotope, which has had its products used by Ubisoft and Sony.

"The industry now sees us as a solid company with proven products," says Ashby of the company's future.

"Now it's time for us to really become the industry standard by getting more studios working with us and continuing to lead the market with innovations and new workflow solutions."

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TRAINING SPOTLIGHT

This month: **Escape Studios**

London-based Escape Studios is an academy that specialises in training students in computer graphics who are looking to break into games, film, TV and commercials.

Having also just opened an LA studio, pupils can study through a full-time intensive course that lasts over 12-to-18 weeks, such as Visual Effects Production, which teaches students elements in VFX including polygon modelling, texture mapping, and advanced lighting and texturing.

Each of these classes consist of no more than 12 students taught by industry veterans.

"As well as professional tutors who have over ten years experience, we have training assistants who help out in the classrooms, and an interactive, community driven online learning system that students get access to during and after their course," says Escape Studios training sales director Paul Wilkes.

"It enables them to interact with their classmates, the Escape Studios communities at large and their tutors, but crucially also revisit and revise the lessons that they have learned in class."

Students are also able study part-time for 20-to-30 weeks, following the same curriculum as their full-time counterparts. These courses, Wilkes says, are aimed at professionals looking to secure better jobs or seeking to re-train.

> ***"Our courses are constantly being updated to ensure what we are teaching is relevant to the industry."***
>
> Paul Wilkes, Escape Studios

As well as this, Escape runs online mentored courses delivered through its online learning service, and takes pupils just under a year to complete. Wilkes says this is designed for "perfect artists" who want to train whilst still in work and to those who can't reach the academy in London.

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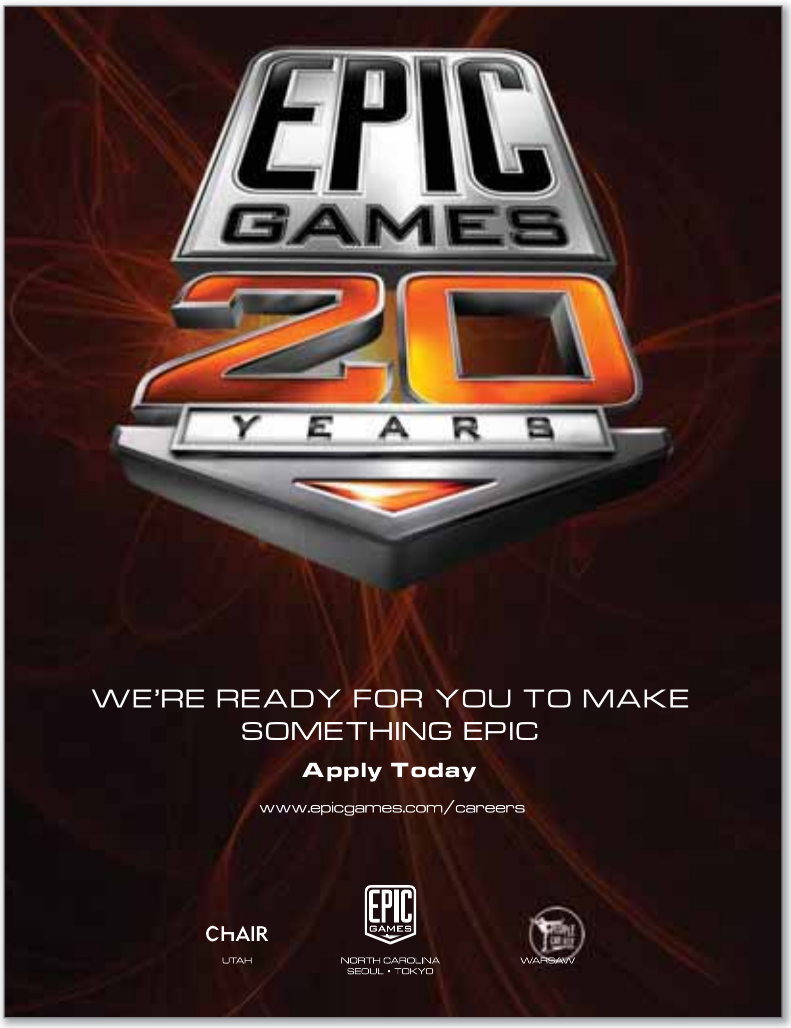

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"We currently have students all over the world on these courses," he states.

"They receive on-going support from their tutor, and are able to follow the course with a group, getting access to a virtual classroom where they can interact and share the experience with others."

He adds that all its courses are closely aligned with what employers in the industry are looking for from their computer graphics artists, and that the academy uses its experienced tutors and close contacts within the industry to make sure it achieves this aim.

"Our courses are constantly evolving and being updated to ensure the tools and techniques we are teaching are relevant to the industries our students want to work in," explains Wilkes

"As these are not academic courses they do not require accreditation or approval and it gives us the flexibility to update the curriculum or change the software we teach when we need to. Through close contact with the industry and the relationship we have with software and hardware manufactures we are able to mimic the industry environments in which our students will end up working."

Wilkes also reveals that Escape is currently looking at the format and delivery methods of its classroom courses to ensure it is keeping up with the changing demands of the industry, and that it could take the academy into new locations and industry sectors in future.

Escape Studio's Paul Wilkes says students around the world attend their courses and can access a virtual classroom to interact with other students

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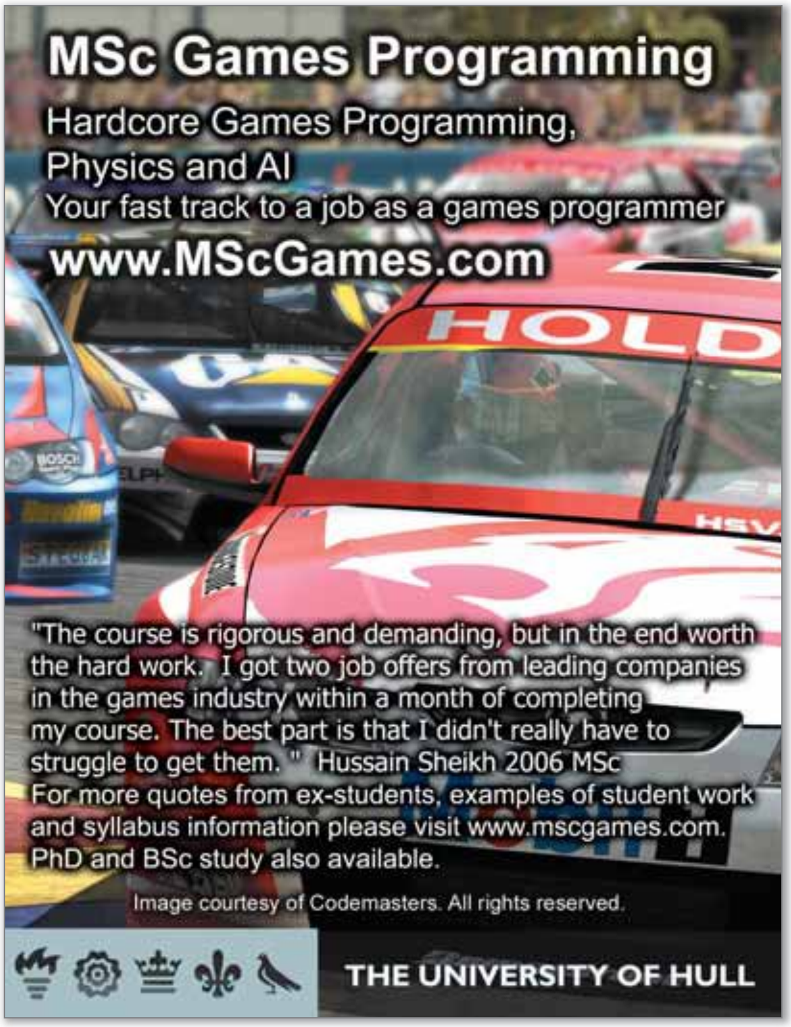

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"The course is rigorous and demanding, but in the end worth the hard work. I got two job offers from leading companies in the games industry within a month of completing my course. The best part is that I didn't really have to struggle to get them. " Hussain Sheikh 2006 MSc

For more quotes from ex-students, examples of student work and syllabus information please visit www.mscgames.com. PhD and BSc study also available.

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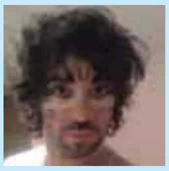
A sideways look at the games industry

THE INDUSTRY IN 140 CHARACTERS

A month in tweets by the industry elite



@acton
I bet I'm the only person on *The Times* 'People to watch in 2012' list that read their entry while eating McDonalds on the #8 bus
(Michael Acton Smith, Mind Candy)
January 18th

@cliffski
I'm trying to integrate some tiny bits of middleware. I dislike doing this. I am not a fan of other peoples code styles. Bah.
(Cliff Harris, Positech)
January 18th

@Flantz
I just want to say, to all the people who have ever cloned one of the games I created: it's ok, life is hard, I love you
(Frank Lantz, Area/Code)
January 25th

@br
The meeting with [nda] was awesome! Glad they loved [nda] and [nda]. I am fortunate to be working on [nda].
(Brenda G Brathwaite, game designer) January 27th

@marksample
Games Academy this week was a roaring success. So many ideas up & running in #gamemaker The guys love it & learn so fast! Big win all round.
(Mark Sample, Ubisoft Reflections)
January 28th

@patrickol
Really pleased that Kaz Hirai is going to be the new Sony President/CEO; he's someone who 'gets' digital/online; a great sign 4 Sony IMHO.
(Patrcik O'Luanaigh, nDreams)
February 1st

@migueldeicaza
Simple, yet effective iOS game, earn hipster credits by playing it before Zynga clones it: *Occupied Forever*
(Miguel de Icaza, Mono and Gnome projects founder) February 2nd

@edfear
"You can now feel free to include Skyrim in the Nolan North section of your video game library, which is to say, your video game library."
(Ed Fear, Mediatonic)
February 8th

@notch
Hooooly nuts, the Double Fine kickstarter just hit its goal of 400k in.. not many hours.. wow.
(Markus Persson, Mojang Specifications)

February 9th

@giordanobc
Hearing about lots of very young kids learning to code. They will likely start developing and publishing games. Will be interesting
(Giordano Contestabile, PopCap)
February 13th

AN OPEN MIND

TIM SCHAFER

Based on his insights into an incredibly successful day of crowdsource funding through the Kickstarter website for a new project

6% Reforming Black Sabbath
17% Crying
77% Crowdsourced funding

Telling his Twitter followers how his Kickstarter funding is going, mere hours after announcing it:
"We just hit $200k...you guys... Oh man. I have to warn you, I always cry at the end of *It's a Wonderful Life*. :')"

Still on Twitter on the same day, pondering another project:
"Okay, on to the next project! The next thing we need to do is get this Black Sabbath reunion back on track, people."

Returning to the Kickstarter website just over eight hours after the initial announcement, and well over $700,000 in pocket:
"We did it! 100 per cent funded in just over eight hours. You people are amazing! But it's not over yet. The number keeps going up and now the question is just how much news do we want to make with this?"

IT FIGURES : FLASH VS HTML

Browser gaming website OneMoreLevel.com recently released a report that attempts to summarise the contrast between HTML5 and Flash as gaming platforms. The report suggests that while Flash offers over **100,000** games to date, currently only '**a few hundred**' exist in HTML5 format. Similarly, while HTML5 reaches an apparent **800-million-plus users**, Flash has an audience of in excess of **two billion**. Meanwhile, while **40 per cent** of browsers support HTML5, **99 per cent** reportedly support Flash. HTML5 began life in **2004**, some **six years** after Macromedia debuted the Flash **Version 3** specification on its website. The report also compared CPU usage with various browsers on Mac and PC. It found that playback with Google Chrome on a Windows PC with Flash Player **10.0** was around **24 per cent** more efficient than HTML5, while Flash Player **10.1** was some **58 per cent** more efficient. At the close of **2011**, of the top **ten** Facebook games, **seven** are available to play in Flash, while **three** are playable in HTML5. Of that **ten**, *Farmville* was the one game available in **both** the formats, the 'Express' version running in HTML5. OneMoreLevel.com is a Flash gaming site.

THE EGO TRIP

We ask some of the finest game development talent a series of questions about the toughest subject of all – their own work

THIS MONTH: Miles Jacobson
MOST FAMOUS FOR:
Heading up Sports Interactive
ANSWERING QUESTIONS ON:
The Football Manager series

What month and year did *Football Manager make its* debut publically on the iOS platforms?
Was it March or was it April? I can't quite remember. This is cruel. I'm going to go for March 2010.
INCORRECT
(*The iOS version was released in April 2010*)

Which version of *Football Manager* introduced a special version dedicated to a certain North London football team?
That was the Arsenal edition, and that was for *FM2010*.
INCORRECT
(*The Arsenal edition was for FM2009*)

***Football Manager* is more than a game for the real world Everton FC. Why is that?**
We have a deal with Everton whereby they license our database from use. And I would say 'watch this space' for the future of that kind of stuff.
CORRECT

Approximately how many new features did Football Manager 2012 introduce?
There were over 800 new features. I can tell you exactly actually. It's 857, but that was never made public, so officially the number of new features is 'over 800'.
CORRECT

In 2006, a rumour emerged about Sports Interactive founders the Collyer brothers, and their plans for a real world football team. What was that rumour?
If I finish bottom of this I finish bottom. That's where my football team finishes. But I do know this one. The rumour was that they were going to purchase Everton Football Club. Those rumours were utter rubbish.
CORRECT

***Football Manager* has very close ties with the real world team AFC Wimbledon. Can you name three players currently active?**
Seb Brown, Max Porter – he's got a great name – Jason Euell, Christian Jolley. How many more do you want? Jack Midson, Gareth Gwillam. I go there quite a lot.
CORRECT

LEADERBOARD

1. Charles Cecil (5/6)
1. Sean Murray (5/6)
1. Paul Gower (5/6)
4. Martin Hollis (4/6)
4. Miles Jacobson (4/6)

Miles joins the ranks in joint fourth – we nearly gave him extra points for his answer to the last question – leaving the 6/6 slot unclaimed.

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THE FAQ PAGE: ERIC CHAHI

Develop grills respected figures from the global games industry

Eric Chahi says he enjoys the diversity of the modern games industry, with various projects being worked on and different team sizes and platforms to work for, meaning there is a place for everyone

> ***"Another World was a favourite of mine to work on because that was a major step in my creation process regarding the way I design games based on the feeling."***

Who are you and what do you do?
I am a game designer. What I do depends on the project. I can program, create graphics or do the design.

What are you working on right now?
I'm working on a new game concept. It is really at the beginning so I can't say anything about it right now.

What was the first video game or product that you ever worked on in the industry?
It was a game named *Frog*, and it was published in 1983 on the ORIC 1 home computer.

What was the first video game you ever played, and did you enjoy it?
Space Wars. It was the one from Cinematronics released in 1977 in the arcade. That was a great experience; being able to manipulate a ship on a screen was fascinating.

What was the most recent video game you have played, and did you enjoy it?
It was *Thomas Was Alone*, an indie game by Mike Bithell. It was shown at the GameCity conference and it is very promising and beautiful, with a clever game mechanism.

What is your favourite game ever, and for what reason?
I don't know. I just can't tell.

How many hours a week do you spend playing video games?
I would say one-to-two hours, but it depends on the games and my free time too. Usually during the crunch period of a game's development I don't play so much of them, for example.

What area of the industry needs more 'investment'?
Perhaps less investment in huge projects?

What do you enjoy about the video games industry today?
It's the diversity. The diversity of projects, of team size, and of platforms. There is a place for everyone.

Of all the games you have worked on, which has been your favourite to work on?
I will tell about three games, because it depends from which perspective that you want an answer.

I'd say *Future Wars* on the Amiga, because it was the only development I did without any stress. I was in charge only of the graphics and animations. All the programming and design was done by Paul Cuisset. It was a nice and peaceful collaboration.

Then there was *Another World* because that was a major step in my creation process regarding the way I design games based on the feeling.

Finally, *From Dust*, because of the systemic approach which has also been an important turning point for me.

What game that you were not involved with would you most liked to have worked on yourself?
I don't know. That question is too tricky.

What other video games developer do you most admire?
I admire Will Wright for his ability to master such complex systems and create fun games with them.

What hobbies, collections or interests do you have that are completely unrelated to video games?
I have many. Paintings, volcanoes, photography, speleology, wildlife, trekking, music and theatre.

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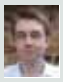
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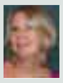
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